

# PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JULY 28, 1883.

## ORIGINAL LECTURES.

### CLINICAL LECTURE ON DISEASE OF THE KNEE-JOINT.

*Delivered at the Bellevue Hospital Medical College*

BY LEWIS A. SAYRE, M.D.

Reported for the *Medical Times* by EDWARD DEVELIN, M.D.

**G**ENTLEMEN,—This colored boy whom I now present to you is 12 years of age, and states that for the past four years he has been suffering with a difficulty of the knee-joint. The parents are both healthy; and the boy himself has always been stout and strong, until he met with a slight accident in which the knee was hurt: he, however, continued to run around for some time after, complaining but very little.

We must now endeavor to find out what is the matter with the boy. Further than what I have just stated, I am unable to get any history from the mother. You will observe that the right leg can be brought straight, and that the left leg is flexed strongly, with the toes everted, with a luxation of the tibia at the knee. That is an evidence that there has been a long-continued inflammation, with absorption of the external condyle and upper portion of the tibia. You will observe this peculiar boggy appearance over the external and internal condyles; all the natural sulci are here filled up, and the knee now presents the appearance of a smooth, globular swelling. To the touch it has the sense of fluctuation, but it does not fluctuate. I think there is a gelatiniform substance within the joint. You notice that as I press upon a certain point, here, he winces from the pain induced. Now, you can often make your diagnosis in these cases by a simple observation of this characteristic deformity, and then thinking to yourself which muscles will produce this position of the leg. You may take any number of cases of this so-called white swelling of the knee, that have gone on to destruction of the cartilage of the condyles, and they will invariably assume this position of flexion of the leg, with eversion and rotation outward of the foot, just as you see here. The leg in this case, you observe, is flexed to a right angle with the knee. Now, a careless observer might think this knee-joint was filled

with fluid, and even to the touch it gives a deceptive sense of fluctuation, but there is no fluid within the joint. It is not a *hydrops articuli*, but this elastic semi-fluctuating feeling is due to the gelatiniform degeneration of the cartilage and other tissues of the joint, commonly called *fungus articuli*.

As I press upon the knee generally I give him no pain, but when I press directly upon the coronary ligaments it causes intense pain; yet I may press a quarter of an inch below that spot and it gives no pain, and the same above this point. This is of the greatest practical importance; for I have seen eminent surgeons examine a diseased knee-joint, and just pass over this little spot above the coronary ligaments, and state that no pain was induced by pressure upon all parts of the knee. This point of tenderness is just where the coronary ligaments are attached on either side, and the slightest pressure upon them, as you observe, produces an instantaneous spasm of pain. This is what makes the case more serious than an ordinary synovitis.

In synovitis the knee has the same appearance as this, but it has a fluid fluctuation. You can bring the leg out straight in synovitis, and the patella floats upon the fluid.

In this disease of the knee-joint, as shown you in this case, you cannot straighten the leg or move the patella, and if you attempt to straighten the leg you will cause intense pain, unless your extension be made in the line of the deformity.

You have often heard me speak of extension and counter-extension: this is the basis of the general treatment in all these diseases of the joints, *but it must be made in the right direction*. You observe that I am making extension now in two directions, and that I cause no pain, simply because I am making my extension in the line of the deformity, which is from just below the head of the tibia upwards, at an angle, towards the foot, and also extending from the leg parallel with the limb. By this means I prevent the diseased surfaces of the joint from rubbing together, and at the same time relieve him perfectly from all pain. Now, when this extension has been kept up for some length of time, the line of extension may be gradually changed, so that the limb can be brought perfectly straight.

If I make my extension in one direction alone, and that parallel with the axis of the limb, I cause great suffering; because I bring the diseased portion of the anterior surface of the tibia against that of the femur; but if I now go behind the leg and press the tibia upwards, my extension relieves him at once. If I could sit here and hold this leg for two or three months, keeping up this extension, the knee would get well. Here, then, is your first point of practical importance: you must secure the limb in this position by mechanical means. This can easily be done by the application of weights and pulleys. If you have not mechanical ingenuity enough to devise some means of holding the leg in this position, it is your duty to sit there and hold it until a cure is completed. It is your business to accomplish this result. I do not care how you do it, as long as it is done.

This end is, however, easily accomplished by putting a strip of adhesive plaster on either side of the leg and securing it with a roller bandage, then, with your weight and pulley, make your traction in the line of the limb. You then pass a band behind the tibia so as to bring the leg forward and upward. You can then gradually elevate your first line of traction and depress your second, until you have brought the leg into nearly the straight position. You can then apply my extension knee-splint, which I have so often shown you.

Now, during the time that he is under treatment in bed, you must use your general treatment, as well as your local treatment, according to the condition of the patient.

In this case the boy will be placed in bed, with the double extension applied as I have just described, and the actual cautery applied over the coronary ligaments. There will also be a large dry sponge bandaged tightly around the knee (both thigh and leg being well bandaged), which will then be saturated with warm or cold water. The absorption of the water by the sponge will cause additional pressure upon the joint, and by this means hasten the absorption of this deposit around the joint.

It may be necessary to open the knee if this material does not become absorbed; but by your extension you have removed the possibility of attrition of the joint-surfaces, and in almost all of these cases, as here presented, they will recover un-

der this treatment with a useful joint and without deformity.

If the disease had progressed further and pus had formed in this joint, this boy would not look as hearty as he does now. We should then have to aspirate the joint, which might need to be repeated; and if this were not successful, we should then have to open the joint and insert our drainage-tubes for the purpose of securing a free discharge of all pus. This, however, is merely an osteitis and syndesmitis all going on together. As for diagnosing where the disease started, whether in the cartilage, or in the bony structure near the joint, it is difficult to say, because in the morbid process they so soon become commingled one with the other.

We have here all the appearances indicating a strumous disease of the joint, and yet you see it has been developed in a perfectly healthy boy, whose parents are both healthy, without any evidences of constitutional taint whatever; so that a low grade of inflammation, from its long continuance, may produce a precisely similar condition of both local and constitutional manifestations as the taint we find in those who have an hereditary constitutional vice.

If, in this case, the treatment is conducted as I have told you, it may be that when the disease is cured we may get perfect motion within the joint. Or it may be that the difficulty is associated with a depraved constitution, so that every attempt at passive motion, although the disease itself may be cured, only excites inflammation; then you must stop your passive motion, as I have frequently told you, and compromise the matter by ankylosis.

Now, after the limb can bear firm pressure upon the articular surfaces, you can remove your apparatus; and then is the time when you begin your passive motions to prevent the joint from becoming permanently ankylosed. Make them very gently at first, then with friction and massage endeavor to increase the circulation in order to secure absorption of the deposit around the joint. Day by day you increase these movements, going a little further each day, but not so as to cause inflammation again. After you have gained some movement, make some short, quick movements within the range of your first movement, and on the morrow you make this same movement again, going over the distance gained yesterday quite easily

without causing any pain. In this manner you excite a flow of the synovial fluid and can then secure additional movement. The synovial membrane, remember, only pours out its fluid under irritation : as long as it is quiescent it does not secrete. Now, do not be in too much haste to secure an increase in your movements ; just carry them to the point of endurance, then put your splint on and lock it up, following out the same plan day after day.

In some cases the constitution is so bad you can never restore the use of the joint ; every time you make passive motion you will excite inflammatory reaction. If you have produced pain by your movements, it should certainly pass off within twenty-four hours. If, now, the pain last over that time, your movements may have been too rapid and severe ; consequently you must stop for several days, until all inflammatory action has subsided, then you can commence anew. Just remember this rule. If, however, as I say, there is some peculiar morbid condition of the system, no matter how gentle you may make your movements they will almost invariably be followed by inflammatory action within the joint : you have then to compromise in the matter and cure your patient with ankylosis. Now, how shall this be done? You simply have to lock the joint up and keep it absolutely quiet.

Now as to the position in which you are going to fix it. Ankylose all joints in the position in which the limb is going to be of most service to your patient. If it is the elbow, it should be at right angles, with the hand semi-pronated, so that the patient can feed himself. If the elbow be ankylosed with the arm in the straight position, it can be of little use but to carry baskets or such articles.

Now, it is just the reverse at the knee, in my opinion, although the rule is given by most authorities to ankylose it at an obtuse angle of about  $115^{\circ}$ . I must differ with this view, however. It is of course more desirable when sitting down that the leg does not project ; but ankylosis at this angle is so insecurely fixed that by any sudden jump the point of union is liable to be snapped, which will then start afresh an inflammation, at a time when, in all probability, the patient is away from his home, and before he can be carried there a severe inflammation has set in, which may result in the loss of the limb.

I know of one gentleman whose knee was ankylosed at this angle, and who, while stepping from a stage, brought his weight to bear upon the ankylosed joint, immediately snapping its union. He lived in Brooklyn at the time, and the accident occurred to him here in New York. This accident resulted in the loss of his limb.

So, if you are going to ankylose the knee, I would advise you to ankylose it as nearly straight as possible ; the patient then can walk better and with greater ease and safety.

Now, suppose you have a case brought to you with the knee ankylosed at an acute angle. You will, of course, endeavor to break it up ; but how is that to be done? You would not break up a bony ankylosis of the knee if it was in a straight position, but, if you have it ankylosed at a right or an acute angle, it is necessary to break it up to secure motion or a better position.

You must, however, remember that we have both bony and fibrous ankylosis. Now, how are you going to decide which is which?

Sometimes the fibrous ankylosis is so close and firm that you cannot move it by any ordinary means.

Now, although your efforts may have failed to secure any perceptible motion, the very fact of pain following your efforts on the next day is sufficient evidence that some motion has been obtained ; for if there had been no motion there would have been no pain at all resulting from your efforts.

If there has been the slightest motion secured by your efforts, there is no necessity for using the saw, but use *brisement force*. Now, having ascertained that you have some motion, put your patient under the influence of an anaesthetic ; then knock the patella loose. This is, as a rule, the most troublesome thing to do, although you can sometimes crowd it off with the fingers and thumbs. If you cannot do this, however, you can take an ordinary large door-key and cover it well with leather ; then, placing the ring portion of the key just under the edge of the patella, hit the end of the key a smart blow with a mallet, your assistant, meanwhile, holding the limb as firmly as possible. By this means you can generally split off the patella from its fusion with the femur or tibia, or both.

Having knocked the patella off, you then endeavor to bend the leg backward, and, having effected your purpose, you now bring it forward, keeping up these motions until you have brought the leg out straight and can flex it upon the thigh. By this means you rub off all the little irregularities, exostoses, which have developed. Just here I would speak most emphatically upon one point which is so often omitted; viz., do not stop as soon as you feel the adhesions snapping under your pressure and be content with the little motion you have gained, but make your breaking up of the joint complete. *Do not stop until you have done this.*

The skill required, however, is in your after-treatment. If it be in an adult, strap each toe separately; if in a child, you can place cotton between the toes and bandage the whole together at the same time. Then take two broad straps of adhesive plaster and carry them up the sides of the leg to the head of the tibia, firmly bandaging the leg with a roller bandage from below up to the same point; then pack the popliteal space with cotton, to prevent pressure upon the tendons, carefully padding around the condyles of the femur and patella, so that the latter may not be pressed upon on either side; then draw your bandage as tightly as you can draw it around the knee-joint only, and, having secured this, take a piece of sponge about the size of your thumb and place it over the femoral artery, then carry your bandage up the thigh, securing the sponge in position. This sponge is placed over the artery so that the pressure by the bandage at that point reduces the circulation through the knee-joint and leg below. Now, do not make your pressure too strong, to occlude the artery entirely, or you will have gangrene resulting from your treatment. You simply wish to partially obstruct the flow of blood to the parts.

Having now bandaged the limb in this manner, you will secure the joint from any possibility of movement by encasing it in the plaster-of-Paris bandage. You now put the patient in bed and elevate the limb, and apply your extension in a line parallel with the limb; you now apply an ice-bag or an ice-water coil over the knee-joint.

Among over one hundred cases in which I have applied this plan of after-treatment, I have yet to see the one in which consti-

tutional disturbance followed the operation. It may be sometimes necessary to give the patient a hypodermic of morphia on the night following the operation, but you must, of course, be governed by circumstances.

You will probably require to keep your patient in this position for ten or twelve days; then remove your sponge compress and the dressings around the knee. The joint may perhaps look black and blue as a result of your violence, but you need not mind that. You may now commence to make a little passive motion to prevent ankylosis. Then re-dress the knee again, strapping it firmly, but omit the sponge compress over the artery; that is all the difference there is in the dressing. You lock the joint up in precisely the same manner as before. In two days' time you can take it down again and make a little more movement. You may perhaps require to give a little chloroform in order to secure your movements. From this time on you will follow the same routine of treatment, applying firm compression and ice to the joint after each attempt at motion, until at the end of three or four weeks you will probably be able to apply an apparatus by which the patient can make movements himself, continuing these movements until the recovery has become complete. This constitutes the treatment of fibrous ankylosis.

If instead of being a fibrous ankylosis it should prove to be a case of bony ankylosis, it will be necessary to make exsection of the bone by removing a V section from the femur, as advised by Dr. Buck, and then bring the leg straight, wiring the bones together with three silver wire sutures.

Now, in order that you may know precisely the size of the piece of bone it is desirable to remove, you can take a piece of pasteboard and mark the exact angle of the limb; then mark out the V-shaped piece on the pasteboard which it is necessary to remove in order to bring your pasteboard tracing straight. Then, laying your V-shaped section upon the patient's knee, you can mark the size piece that is necessary to remove in order to bring his leg straight. All this, however, is not necessary if you have a good mechanical eye.

It is preferable to perform the whole operation antiseptically; and, if skilfully performed, no pus will result.

These are a few of the most practical points which I cannot impress upon you too strongly the necessity of observing in these cases of disease and ankylosis of the knee-joint.

## ORIGINAL COMMUNICATIONS.

### FRACTURE-REPAIR.

*AN EXPERIMENTAL STUDY ON THE IDENTITY OF CALLUS AND TRUE BONE.*

BY GEORGE E. SHOEMAKER, A.M., M.D.

(Extract from a Thesis presented for Graduation at the University of Pennsylvania, 1882.)

CERTAIN fundamental facts, such as that broken bones would reunite, and that by means of a new substance resembling bone, have been undisputed for centuries; but the origin, composition, structure, and manner of formation of this bone-like substance have been much discussed. Although now for so many years the microscope has lent its aid to such investigations, a comparison of authorities shows such a present diversity of opinion that there is undoubtedly room for further research, both in the physiology and pathology of the structures concerned. Especially does the identity of the new formation with true bone seem to be undetermined. The subject of callus-formation, if interesting, is undoubtedly difficult for original study; and the writer would refer at the outset to his appreciation of the disadvantages which surround a student in undertaking such work. The record of his observations, however, is, after all, only the expression of an individual opinion, as has been said, or an attempt to picture an individual impression; and from this stand-point there is room for every one.

The experiments herein described were performed in the laboratory of the University of Pennsylvania, under the supervision of Dr. H. F. Formad.

I. In taking the affirmative of the proposition that callus becomes true bone, analogy would seem to be against it. The repair of most other animal tissues, after a break in their continuity, takes place by means of a material unlike the wounded tissue; and, in spite of the complicated changes which aid in restoring the shape and function of the part, the new-formed joining substance never becomes entirely

like the original tissue, as observation and abundant authority show. Undoubtedly, this important law obtains, however, that the embryonal tissue which is produced in the repair-process has a "tendency to reproduce the tissue of the region where it is situated."\* After the repair of a ruptured muscle, as shown by Paget, Adams, and others, the new tissue "remains permanently as a fibrous band."† The union of nerves, though often studied, occurs in a manner but little understood. A process is, however, claimed for it which sometimes results in a rebuilding of true nerve-tissue. This process, whatever it is, is still unequal to the repair of any considerable loss of nerve-substance, the breach being then permanently filled by cicatrical tissue and the function of the part being performed by collateral trunks and fibres. The permanence of the scar in areolar connective tissue and in skin is well known, and a familiar microscopic appearance is that of "old cicatrix," consisting entirely of stiff fibrillar connective tissue which is perfectly non-vascular.

If then callus becomes true bone, it is in exception to the general rule. But analogy, at best, can show but probability in any argument, and in the presence of higher proof is of limited value. This other proof we may seek under the second head:

#### II. Structural Likeness to Normal Bone (*with preparations from the human subject*).

Aside from experiments upon callus-formation, which were made upon the dog, as detailed farther on, important evidence can be obtained from the study of old callus taken from the human subject. No amount of theory as to the origin of callus-material, or observation of the method of its organization, can determine absolutely the results of the process; and it is these results which chiefly concern us here. Fortunately, they are tangible and subject to direct examination. The plan pursued in obtaining examples has been to secure from the dissecting-room of the University, and from the stock of bones in its boiling-room, specimens of old fractures. The difficulty in obtaining material of this kind with a known history is, of course, great; but this disadvantage is not all-important. Great care was taken to avoid mistakes in the selection of fractures. As is well known, the external evidences of such a lesion may

\* Cornil and Ranvier, *Path. Histol.*, 71, 1880.

† Ashhurst's *Surgery*, 207, 1878.

be so far obliterated by time as to render their certain detection difficult; but there are few cases which section with a saw will not make clear. It is also exceedingly hard to recognize the former relations of a piece of bone which has undergone the necessary preparation for the microscope; and, however clear upon the untouched bone may appear the limits of a line of fracture, their identification upon the section is by no means easy, as the writer found to his cost in several carefully-prepared specimens.

Two methods were followed in preparing the sections for the microscope:

(a) Decalcification by acids, and cutting.

(b) Grinding and rubbing down the hard bone to the required degree of thinness.

The best results and most characteristic appearances were obtained by the second method, which was carried out as follows. A plane surface, including the line of fracture, was first secured by sawing with a very fine jeweller's saw. This surface was ground smooth and flat on an emery-wheel, and polished by rubbing with a very fine stone wet with water. Solid shellac was now melted upon this polished face with an alcohol-flame and rubbed in. A plane surface upon a block of wood was similarly covered with melted shellac, and while both were kept hot the ground surface of the bone was accurately brought in contact with the wood-surface by rubbing. After the shellac had cooled, the saw removed the surplus bone, and all that remained of the process was the careful grinding down and polishing of the remaining surface of the layer of bone cemented to the wood. When the layer was sufficiently thin for microscopical examination, the whole, block of wood and all, was immersed in alcohol, which completely dissolved out the shellac and left the fragment of bone ready to be stained and mounted in the usual way.

Let us first consider, among the many, specimens from a large callus overgrowth upon a human femur. The portion selected was of light, spongy texture, being composed entirely of cancellated tissue, and it ought to present the most unfavorable conditions for comparison with normal bone. Under the microscope there is seen in the decalcified preparations a great irregularity in the arrangement of the ordinary elements of bone-tissue; but this irregularity does not seem to be sufficient to degrade even this to a cicatrix. The medullary

spaces are about normal in size, and quite a number of well-formed Haversian canals, with their concentric arrangement of lacunæ and lamellæ, are to be found. Canals of Havers would only be expected in a few portions, however; for, as stated, the whole structure resembles cancellated bone-tissue, where these seldom occur, inasmuch as the processes of nutrition can be carried on directly from the medullary spaces. Well-developed lacunæ with canaliculi are seen throughout the structure, their relatively large number being a remarkable feature of this callus.

Again, a full-grown human fibula, fractured within the upper third, was selected. The medullary canal was in part re-established: therefore the fracture was quite old. Decalcified sections were made, including a layer of callus between portions of original bone. Throughout, well-developed Haversian systems appear, with great regularity of structure. The limits of the callus are not sharply defined, and it is impossible accurately to distinguish it from the original bone by its structure.

The most beautiful demonstration, however, was obtained from sections of a human tibia. Fracture, approximately transverse, had occurred at the junction of the lower and middle thirds. The upper fragment was displaced forward and inward, overlapping the lower about two and a half inches. Externally all superfluous callus had been absorbed. Upon division with the saw, the evidences of a repaired fracture were complete. A double partition of overlapped cortical substance still existed through most of the part involved. At one point, however, communication between the separated portions of the medullary canal had been re-established by the eating away of both the compact walls intervening, so as to make them cancellated. The remains of the old medullary canal were still seen in the cross-section upon either side of the partition. We have here, then, a typical instance in which it was necessary to bridge over with callus a space between overlapping bones, and from the callus within this space, at a point where the original fragments had never been in contact, the sections were prepared by grinding. These particulars are given to show that there was no possibility of mistaking bone of the original formation for callus. What, then, were the microscopical appearances of this specimen?

One of the sections, prepared by grinding, includes some cortical substance of the callus-growth, as well as some cancellous tissue, neither of which presented to the naked eye any points of difference when compared with the original bone.

The whole exhibits a remarkable example of "regeneration." Haversian systems appear beautifully formed in the cortex, lacunæ and canaliculi showing nicely. There is not even a great irregularity of arrangement. The cancellous tissue is also typical bone. In the walls of the medullary spaces there is no room for the establishment of Haversian systems, and, consequently, none exist, as is the case in normal bone. The arrangement of the lacunæ is also exactly normal, nearly all having their long axes parallel to the sides of the portion under examination, no matter what curves these sides may describe. There seems, however, to be one point of difference: it is in the number of lacunæ within a given space. For example, a typical field of the cancellated tissue of normal rib showed, under the one-eighth objective, thirty-three lacunæ. A similar field from tibia callus showed seventy-four, another from humerus callus showed ninety-six, another seventy-one lacunæ. In each of these instances, which were taken at random, the callus exhibits more than twice as many lacunæ as are seen in the normal bone. Again, a careful examination of the cortex of the tibia callus will detect very slight irregularities in the arrangement and direction of the Haversian systems. The canals run somewhat more obliquely to the long axis of the bone, and the concentric systems of lacunæ around them form circles somewhat less finished and more irregularly placed than is normal. No one, however, would for a moment hold, upon examination of the slides, that these differences are sufficient to make this callus anything else than true bone. Nothing but an examination of the slides can, however, make the point evident.

We have then shown a strong structural likeness. To complete the discussion, similarity should also be shown in chemical composition and in mode of formation.

Chemical composition will not be here studied; and it may be considered as the least disputed of the above points. It is stated by one writer that callus contains twenty per cent. more of lime-salts than

does the neighboring bone; but it is evident that this must vary greatly with conditions and localities. Without attempting to discuss the point, it may be said that if it be true, as indicated above, that callus contains more lacunæ than does bone regularly formed, its specific gravity when dried should be less, other things being equal.

The discussion of the third division of the subject will now be taken up, and its theory will be illustrated by sections prepared from the bones of the dog.

### III. Resemblance in Mode of Development between Callus and Bone.

As to the normal method of bone-formation theories are rife. Prominent is that of Virchow, with his application to normal bone-development of the changes which occur in rachitis; but the explanation of H. Müller, which has been verified by Cornil and Ranvier,\* presents many points of excellence. According to his theory, osseous tissue is developed according to the same general law, whether from cartilage, from fibrous tissue, or beneath the periosteum.

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This law may be thus summed up. The ground-substance of the tissue is dissolved; the cells proliferate, become free, and give origin to an embryonic tissue, the elements of which [osteoblasts] become surrounded by a new fundamental substance and are transformed into bone-corpuscles. Rindfleisch agrees, as follows:† "Genuine osseous tissue is produced in that in a connective tissue richly supplied with capillaries . . . there first arises a dense basis-substance, which encloses the cells becoming stellate in regular interspaces, thereupon, however, itself experiencing an impregnation with the salts of lime." Other authorities would have us believe that the large clear cells, or osteoblasts, which really form the bone are derived from the blood, and are not descendants of the cartilage-cells and fibrous tissues. Frey, for example, describes them as differentiated from a mass of lymphoid cells derived from the blood, which is a point of great interest in connection with the origin of callus-material from the medulla of long bones. Whatever the origin of these large cells, which correspond to the nucleated cells with processes which Virchow demonstrated in lacunæ, they

\* Path. Histol., Amer. ed., 27, 1880.

† Path. Histol., Amer. ed., 56.

certainly play a most active part in the construction of bone-tissue, and we shall be able to demonstrate their presence in ossifying callus in the bones of the dog.

If the process of true bone-formation has been differently understood and described, that of callus-growth has been more so, the history of the various investigations of the subject being most interesting.

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The first step in the process of repair is, roughly speaking, the deposition in the neighborhood of the fracture of a spindle-shaped mass of formative material. The second is the organization and arrangement of this substance into the permanent form which it is to assume. The origin of the reparative material, though disputed, is various; the blood, including probably the white corpuscles, the surrounding connective-tissue structures, the medulla in the case of the long bones, and the periosteum, each having a part to contribute.

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The method of ossification now comes up, and we find that it proceeds in a way analogous to that in which true bone is formed. Indeed, all the elements and conditions necessary to true bone formation are present,—*i.e.*, a new and healthy periosteum surrounding the whole; abundance of hyaline and fibro-cartilaginous material just suitable for bone-formation; a plentiful blood-supply; the modifying influence of the presence of bone-tissue; the presence, above all, of the so-called osteoblasts; and, *a priori*, we would expect a true bone-regeneration.

In order to study these points effectually, preparations were obtained by fracturing the leg-bones of the dog, and from these sections were made for the microscope. Here, as elsewhere, long bones were selected as being most typical. The method pursued was as follows:

The dog was etherized, and the foreleg broken by direct force. Wooden splints and roller bandages were carefully applied, with a sedative dressing of lead-water and laudanum, until all swelling had subsided, when plaster bandages were used, as giving greater security and less trouble. The best of food and attention were given, in order to secure the most favorable results. After the proper interval the animal was chloroformed and tied, the main artery of the fractured limb opened, and Beale's red

injecting fluid, well warmed, was introduced under steady manual pressure, while the vital circulation still continued. This was done under the impression that a continuance of the natural capillary and venous circulation would assist in securing a thorough capillary injection by removing obstacles from in front of the injecting fluid. The animal was now killed, and the fractured bone removed with the tissues immediately about it. The specimens were soaked for three days in alcohol, diluted at first one-half, then used full strength, nominally ninety-two per cent., in order to harden the soft parts. They were split longitudinally with a saw through the medullary cavity of the bone, and decalcified by nitric and hydrochloric acids mixed. The acid having been removed by the action of water, the specimens were prepared for the microscope in the usual way,—cut, stained with carmine staining-fluid or "sulphindigotate of soda," treated with alcohol, oxalic acid, and oil of cloves, and mounted in damar varnish. The sulphindigotate of soda, while not otherwise as satisfactory a staining fluid, offered the advantage of leaving the injecting fluid stained purple, which afforded a contrast in the vessels not otherwise obtained.

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In one section we find, for the sake of illustration, that by the twenty-third day ossification is considerably advanced. Canals, filled with vessels, are seen running at right angles to the long axis of the bone, through the growth which constitutes the external ensheathing callus; at another point may be seen a mass of unchanged hyaline cartilage, vascular as are all temporary cartilages. Osteoblasts are found clinging to the edges of the old bone and at intervals through the fibrous substance, and the transition into true bone may be observed. We find that the cartilage-cells proliferate. Calcaceous trabeculae are laid down, and osteoblasts arrange themselves along them or along the edges of the old bone. These osteoblasts are surrounded with intercellular substance, which is soon infiltrated with bone-salts, as in true bone-formation. There would seem to be in this intercellular substance a kind of vital affinity for bone-salts, analogous to the affinity of the connective-tissue cell of some localities for oil. The tissue which is soon developed shows lacunæ, canaliculi, Haversian systems, and medullary spaces, though all

may be more or less irregular in arrangement.

We have now endeavored to show that the mode of development of osseous callus is similar to that of normal bone; that the necessary conditions are the same in both cases, and that these conditions exist in both cases. This would seem to be a strong indication in favor of the ultimate products being the same.

We have also shown by the examination of these products in old fractures a most remarkable resemblance between callus and bone, a resemblance such that, in favorable cases, with slides mixed and unmarked, it would be almost or quite impossible to distinguish them.

Finally, then, as the result of the present study, we arrive at the conclusion (1) that in the repair of fractures true bone may be reproduced; (2) that under unfavorable conditions the process may be seriously modified or arrested in various stages; but (3) that there is a tendency to true bone-formation in every case.

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#### NOTES ON JENSEN'S CRYSTAL PEPSIN.

BY HUGO ENGEL, A.M., M.D.,

Fellow of the American Academy of Medicine, etc.

THE following, selected from a large number of similar cases, induced me to write these lines. Of the many new preparations which recently have appeared in the market, there are comparatively so few possessing real value that when we meet with such of the latter class we should not withhold just praise and make their merits known to the profession.

Mrs. M. had been nursing her youngest child, a boy, until he was seven weeks old, when her right breast inflamed. A homœopath who attended her, while allowing the inflammation to proceed far enough to change into a large abscess, forbade her nursing the infant with the other sound breast, because "the morbid material was contained in the milk of either side and would kill the baby." In consequence of this—to give it a mild name—remarkable reasoning and over-cautious procedure, the secretion of milk soon ceased totally,—a result which proved injurious alike to mother and child. As the former does not concern us here, I will mention only that I succeeded, after considerable trouble, in

getting her well; but the child, after being weaned, emaciated rapidly, and so much so that when it came, some two weeks later, under my charge, it already suffered from that condition which, in the absence of any other detectable lesion or cause, alone is correctly called marasmus. I regulated the feeding of the infant with diluted cow's milk, to which some sugar and a grain of salt were added. The nursing-bottle in all its parts was scrupulously kept clean, the temperature of the milk a uniform one, and the feeding done regularly every two hours. But when after four days the discharges from the bowels still continued unhealthy and the child to lose flesh and to decline in general health, pepsinum saccharatum in the dose of five grains was added to the milk. For the next day or two the child seemed to be a little better; but when it relapsed into its former condition, first the same dose of Scheffer's and then of Boudault's pepsin, to either of which diluted hydrochloric acid was added, were substituted for the saccharated pepsin, with, however, the same want of success. I then ordered, for the first time in my practice, Jensen's pepsin, gr. ii, with one minim of diluted muriatic acid, to be administered four times daily when the child was fed. Immediately, almost, an improvement began, and the boy grew strong and plump during the following seven or eight weeks. The parents, who hitherto had lived near Second and Green Streets, now moved to Tenth and Fitzwater Streets; and, as it seemed very inconvenient to have the medicine put up by the apothecary in their former neighborhood, from whom they always had procured it before, they asked him for a copy of the prescription, and brought it to a drug-shop not far from their new residence. I had then not seen the child for nearly two weeks. It had taken the medicine prepared at the new place for about five or six days, when again it was brought to me, with every sign of going backward and relapsing into its former marasmic condition. Its decline in health had commenced so simultaneously with the taking of the last medicine prepared by the new apothecary, that I advised the mother to procure the solution once more from their former apothecary. This was done, and again improvement began almost immediately. Some three weeks later, a part of the medicine having been spilled, and the latter suddenly giving out,

the parents were again induced to buy the pepsin in the neighborhood, when it became apparent to even the most superficial observer that the benefit the child had derived was due to Jensen's pepsin: again the boy's health declined, and he lost flesh; and when the now frightened and thoroughly convinced mother again substituted the old preparation, she once more had the pleasure of seeing her infant thrive.\*

No further disturbance in the health of the latter took place; the baby looked the picture of health, and when with the appearance of a sufficient number of teeth the child was able to digest a more solid food, the dose of the medicine was gradually reduced in size, until at last the boy continued to do well without the assistance of artificial gastric juice.

Mrs. R. requested me to attend her sixteen-months-old child, suffering from cholera infantum. After I had succeeded, by baths, by the utmost attention to cleanliness, and by insisting upon the little patient being carried about in the fresh air during the cooler hours of the hot summer days (it being July), and by permitting it to make frequent trips in the ferry-boats and steamers proceeding up and down the Delaware, and by appropriate medicine, in putting a stop to the vomiting and the frequent morbid discharges, I administered pepsin in conjunction with dilute muriatic acid, to improve the digestion. But the result was by no means satisfactory until I prescribed Jensen's pepsin, when within a few days a decided improvement was noticed; and, as this continued steadily, I discharged the child as well. About a week later it was again brought to me, on account of a relapse. I then elicited the following. As long as the mother had to come with the child to my office, she had the medicine put up by an apothecary to whom I had sent her; but when the visits to me were discontinued, she considered it too great a distance (living at Twenty-Seventh Street and Ridge Avenue) to send always down town for the medicine, and so she procured it from an apothecary in her neighborhood,—with what effect has been mentioned. I told her what I thought, that perhaps the medicine did not contain the genuine preparation I had ordered, gave her a new prescription, and advised

her to have it put up by the former apothecary. She did so, and for all time afterwards, as the immediate improvement of the baby was too apparent not to ascribe it to the medicine. When the child, which continued to grow stout and gradually regained its normal health, was able to take more solid food, the medicine here also was gradually withdrawn, and without any detrimental effect.

Besides these two cases, I will mention, with as few words as possible, two more. One was that of a lady *enceinte*: she was suffering a great deal from nausea and vomiting. Other remedies having been tried, but without success, I prescribed pepsin,—at first, however, with no result at all. I then changed it to Jensen's pepsin, and after the third or fourth dose the disagreeable symptoms had ceased almost. When I discharged her she asked me if she could have the medicine prepared by a relative of hers (she having had the medicine put up so far by my apothecary), as she would get it much cheaper. I consented, but cautioned her to let me know immediately when her former symptoms should return. Her relative evidently substituted a different preparation of pepsin, as the lady, after having taken his medicine for a day or two, returned to me with the information that the nausea had again reappeared, though not as yet the vomiting. At my advice, she procured the pepsin from the former apothecary again. The result was as expected: the nausea ceased again.

The last case which I pick out from a large number was that of a girl, *æt.* 16, suffering from chlorosis. No matter which preparation of iron I tried, her stomach would rebel: either vomiting or severe nausea would set in, or she would feel a heavy pressure in the epigastric region. I then prescribed Jensen's pepsin with dilute hydrochloric acid to be taken at the commencement of each meal, and the iron about half an hour after the latter. From this time on she was able to take the iron. She also (this being the reason I mention her case) procured the medicine with the pepsin once from an unreliable apothecary, and with the same result as attended the other cases reported: the symptoms of indigestion returned, to disappear again on the resumption of the genuine preparation.

I had frequently tried every imaginable combination to prevent the disturbance of

\* The apothecary in their new neighborhood confessed, later, the substitution by him of Scheffer's pepsin for Jensen's.

the stomach happening in some persons whenever they have to take opium or any of its preparations. I could report a long series of cases in which the annoying symptom ceased on combining Jensen's pepsin with the opiate; but those mentioned above will be sufficient to prove from actual experience that we possess in this remedy a preparation of pepsin superior in every respect to all others of its kind in the market. The following will be of importance to know regarding pepsin preparations in general and Jensen's in particular.

Pepsin itself is a ferment. There has as yet been no method detected by which it would be possible to obtain pure pepsin,\* "this alone and nothing else." Every process by which pepsin is manufactured, no matter if by simple digestion and evaporation (primitive, Lamatsch's), or by precipitation with acetate of lead (French, Boudault's), or by precipitation with a concentrated solution of chloride of sodium (American, Scheffer's), results in the obtaining of only a very small percentage of pepsin, and this of very limited strength. It was thought that especially by the latter method pure pepsin would be precipitated; but such is not the case: the albuminoid bodies contained in the macerated stomach are thrown down, and only the property of pepsin to be carried along with any precipitates produced in this solution is the cause of all these preparations of gastric juice containing any pepsin at all. Its unlimited and never uniform dilution with sugar of milk makes this form of gastric juice still weaker and more uncertain in its action. The French pepsin (French Codex, Boudault's) is expected to dissolve twelve times its weight of albumen (hard-boiled), the American (Scheffer's), and the German, about fifty times. A plain arithmetical example gives us the following figures. One ounce of beef contains four hundred and eighty grains: according to the French Codex, forty grains of pepsin, and according to our Pharmacopœia, ten grains, would be necessary to digest this quantity of beef. But, as a healthy person, besides other albuminous aliments, will eat for a meal a quarter of a pound of beefsteak at least, one hundred and sixty grains of the former and forty grains of the latter preparation would be needed for its digestion. How

does this coincide with our usual dose of Boudault's or Scheffer's pepsin,—ten grains?

Jensen's crystal pepsin, which has received the name of crystal (not crystallized, as it is often erroneously called) simply from its peculiar glistening, crystal-like appearance, is (without the addition of an acid) perfectly soluble in water, and not precipitated by common salt, therefore a peptone with very great pepsin-effect; "yes, it has proven itself to be the most powerful preparation of pepsin the market offers, one which is capable of dissolving over five hundred times its weight of hard-boiled albumen."† Of its manufacture, which seems to be known thoroughly only by Jensen, we can presume that it is prepared by maceration of the stomach and its mucous membrane in acidulated water at a temperature of  $38^{\circ}$  to  $40^{\circ}$ ; the albuminoids are changed into peptones (causing in this way the production and gain of all latent pepsin), and by a peculiar process the syrup-like mass resulting is dried on glass, when the "pepsin" appears in the shape of transparent scales.‡ So carefully is the whole process conducted, and so utterly at variance with all previous methods, that the property belonging to all other preparations of pepsin, of containing chlorides, is totally wanting in Jensen's. If to a solution of any other pepsin nitrate of silver be added, chloride of silver will immediately appear as a thick white deposit, while the same test applied to Jensen's pepsin will either be without any result or (due to a trace of muriatic acid) a faint white cloud will show itself. When we reflect upon the large quantity of pepsin Jensen is able to get from a macerated stomach, the absence of chlorine in his preparation, and certain well-known physiological effects of muriatic acid on digestion, the following theory does not seem to be so very absurd to the writer of these lines. There is always only a certain small quantity of pepsin present in the stomach, but a far larger amount of certain albuminoids and of muriatic acid. This latter acid may be in the stomach less for the purposes of any direct action on albuminoid substances to be digested than for the purpose of changing by its chemical action the quantity of latent albuminoid bodies necessary into real pepsin. In this physiological process a change into peptone

\* Lecture delivered by Tscheppé, Deutsche Apoth. Zeit., 3 and 4, 1883. Many of the facts mentioned in my article have been gained from this lecture.

† Tscheppé, *loc. cit.*

‡ *Ibidem.*

first takes place. If such be the real action of the acid in the stomach, several facts are explained: that the addition of muriatic acid to albuminous food accelerates the digestion of the latter more than an increase in the quantity of artificial pepsin added to the same, and, further, that Jensen's pepsin is free from muriatic acid, because, all the albuminoid bodies (latent pepsin) of the stomach being changed into peptones (the first stage in the transformation of the same into pepsin), all the acid is used up in this chemical action.

In consequence of the great popularity Jensen's pepsin naturally enjoys on account of its reliable and powerful effect and its ever uniform strength, many imitations have been placed on the market, and, to the shame of such apothecaries or through their ignorance, are dispensed as Jensen's pepsin. The fact just mentioned (the absence of chlorine), its perfectly dry, crystal-like appearance, and its total solubility in water without the addition of an acid, will serve to distinguish the genuine Jensen's pepsin from all imitations.

At the University of Pennsylvania,\* by Dr. Tscheppet in New York, by Dr. L. Wolf,† of Philadelphia, and many other competent and impartial chemists, Jensen's pepsin has been thoroughly tested and found to possess the power of dissolving more than five hundred (about five hundred and eighty) times its weight of hard-boiled albumen. When therefore of the strongest of all other similar preparations, of the one directed by our Pharmacopœia, forty grains are indicated as the correct dose,§ four grains only of Jensen's pepsin would answer the same purpose. This fact has an important bearing not only on the size of the dose, but also on its cost: the ounce of this pepsin being sold for one dollar and seventy cents, a dose of ten grains would cost only about three cents, and, as one grain of it is equivalent to ten grains of the American pepsin, its great cheapness becomes at once apparent.

When testing any preparation of pepsin for its strength, the albumen should be finely subdivided, the solution acidulated with 0.5 per cent. of the pure concentrated hydrochloric acid, and the whole kept at a temperature of about 103°, which experi-

ence has proved to be the most favorable for the effect of this ferment. It actually has never been demonstrated, as yet, what really is the temperature of the stomach during the stage of active digestion,|| but to judge from analogy, viz., from the well-known high temperature, during digestion, of the blood in the hepatic vein on leaving the liver, at a time, therefore, when the functions of this organ are carried on most actively, and to judge from the temperature of which experimental research has proved it to be, outside of the stomach, the most favorable for the effect of pepsin, there can be no doubt that the heat developed in the stomach during digestion reaches about 103°.

Lastly, I wish to remind the reader that careful investigations have proved these facts.¶

Pepsin alone has very little influence on digestion: its effect increases with the quantity of acid added. Double the dose of pepsin alone will not visibly accelerate the digestion induced by a single dose; but doubling the quantity of the acid (certainly within physiological limits) will cause the digestion to be finished in less than half the time. As a rule, the most favorable effect of Jensen's pepsin can be obtained when to each grain of the latter about one minim of the diluted hydrochloric acid is added, but with the proviso that on account of its being a ferment the pepsin is to be first dissolved in water, and to it in its diluted state the dose indicated of the acid is added, as follows:

R Pepsin. crystal. Jensen, gr. lxxii;

Aquæ floris aurant.,

Glycerin.,

Syrup. limonis,  $\frac{1}{2}$  f $\ddot{\text{3}}$ i;

Cui adde:

Acidi hydrochlor. dilut., f $\ddot{\text{3}}$ iss.

M. S.—Dose: one teaspoonful in four ounces of water to be taken at meals.

No alkali should ever be administered at the same time or in combination with any preparation of pepsin, the slightest

|| To determine for myself this question, I made two experiments. I fed two young dogs with about half a pound of boiled beef. Two hours later I rapidly opened the stomach of one dog and inserted a self-registering thermometer. The temperature ten minutes later was 103.4°. The other dog was first chloroformed, and then the same experiment performed. In the latter case the temperature was only 102°, but, as the dog vomited during the procedure and died immediately after, I suppose these causes brought about the decrease in temperature. As the experiments were not conducted with sufficient care, I give the results for what they may be worth.

¶ See article on *Œsophagoscopy and Gastroscopy*, by H. Engel, Phila. Med. Times, May 19.

\* Report by Dr. Richardson, Med. and Surg. Rep., June 9, 1883.

† Dr. Tscheppet, lecture, *loc. cit.*

‡ Report by Dr. L. Wolf in Jensen's pamphlet.

§ See example above cited.

addition of such making the latter inert. Of all the acids, muriatic acid is the most favorable in its effect ; then come, in the order named, phosphoric, nitric, and sulphuric acids ; the vegetable acids having no appreciable effect.

Jensen's pepsin, when without the addition of incompatibles, administered under the conditions described and combined with the acid as indicated, and in a dose in comparison to the albumen to be digested (1 : 500), will never fail to produce the effect calculated : one can always rely upon the result as gained in the cases first reported in this article, and which were picked out from a large number of similar cases, because it so happened in each case that the accidental substitution of another preparation of the gastric juice, and the consequences following this fact, proved beyond a reasonable doubt the superiority and greater reliability of Jensen's pepsin, which, moreover, has been confirmed by experimental research.

507 FRANKLIN STREET.

#### A FEW REMARKS ON THE CAUSES AND TREATMENT OF CONSTI- PATION.

*Read before the Philadelphia County Medical Society,  
April 25, 1883,*

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Physician to St. Mary's Hospital, etc.

CONSTIPATION is a very common disorder in all communities, and from considerable observation I believe it is specially prevalent in large cities,—this one being no exception to the rule. In fact, my notes show that a greater percentage of such cases have been treated by myself here than in any other place in which my professional services have been called for ; and, as my field for observation was a wide one climatically, during a service of something more than nine years of army life, one-half of which—during the so-called "unpleasantness"—was spent in Virginia, Kentucky, and Tennessee, and the remainder in the Gulf States and the far West, with the additional experience of some twelve years in our own City of Homes, I feel reasonably safe in making the assertion, although I consider the fact to be somewhat in the nature of a blot on the fair fame of our metropolis, for it always has been my opinion that the

community should be "regular in their bowels," as the laity term it, even though they be irregular in their other habits.

With this long introductory sentence the first part of our subject is reached,—viz., the causes of constipation ; and of these three only may at present claim our attention, the first of which is *inattention to proper diet*. Although the teeth of man— and woman too—show him to be omnivorous as to food, the demands of labor, society, and acquired peculiarities of appetite have greatly modified the character of our every-day bill of fare. Children are nowadays permitted to acquire likes and dislikes at table, little whims and caprices are indulged as to taste which should not be permitted by their parents ; for I hold that in this respect education should be brought into action, just as in the matter of ambidextrousness with the knife and fork. In the one instance the facile handling of the instruments necessary for the preparation of the food in assisting mastication is a good and easy method of teaching the young how to use more formidable tools later on in life, when apprenticeship to trades, business, or other vocation ensues. Despite theory attributing right-handed dexterity to a greater supply of blood to the left hemisphere of the brain, I contend that there is no need for right- or left-handed workmen, no matter what their task may be ; and the earlier the young learn this the better. Precisely so is it with the diet itself. I firmly believe that many delicate constitutions are perpetuated and rendered still more weakly by the failure of parents to compel children to partake of a proper selection of food ; such articles as milk, butter, eggs, etc., or compounds containing them, being rejected by young people without sufficient cause, and no effort made by their elders to inculcate the necessity of supplying the needed elements as growth proceeds. The increasing want of reconstituents, medicinally, such as the various cod-liver oil emulsions and phosphatic preparations, in minors, is resultant largely from neglect in this direction. I do not, of course, urge the forcing of unsuitable food upon infants, for there simplicity is the rule ; but it is in childhood and adolescence that better respect should be observed in this direction.

In adults, too close adherence to a limited diet is very apt to engender not defi-

cient development, but constipation ; and this is particularly true of hard-working people in stores and factories, where the food, from greater portability, ease of preparation at the time of eating, and too often as a matter of cheapness, is largely farinaceous, with perhaps some slices of cold meat,—this generally being salted or dried,—unless under exceptional conditions, where a full, hot meal, with vegetables, is partaken of at the close of the day's labor. This habitual diet is in itself a factor in the creation of deficient intestinal activity, without taking into consideration the effect of constrained indoor work attending greatly towards the same abnormal condition. The walk to and from the scene of work is usually the only exercise of this kind taken on weekdays, and on Sundays most working-people spend the time at home during much of the year, the church-goers attending service near at hand, as a rule.

Secondly, habit is also closely connected with the prevalence of constipation. Many persons visit the water-closet at uncertain and irregular intervals, and women are specially negligent in this matter, particularly in the higher classes of society. They go only when urgent need compels, and, agile though they may be in the ordinary duties of their households, the calls of nature are too frequently left unheeded until the costive habit is firmly fixed as it can be, and frequently is from this cause alone. It is so with business-men, who defer the duty because a response after breakfast at home may delay their arrival at the office, and, when there, the need is no longer felt, or something needing prompt attention now absorbs time, and the matter is forgotten or deferred to a more convenient season. A large number of people of intelligence do not know or believe that a daily evacuation of the rectum is a necessity to perfect health, and from this they conclude that a day or so additional between-times is no great harm, should travel in these busy days, or an out-of-town jaunt if at leisure, interfere with the visit to their own closet, they not caring to patronize the public latrines on steamboat or railroad-train or to seek the recesses of the woods during a picnic. Delays are dangerous here, as in other affairs, and the constipated habit is readily thus established.

A third developer of constipation is the

presence of rectal or anal disease. The pain, amounting to agony in many cases, of fissure, ulcer, or hemorrhoid, is so great, and the torture is so persistent after defecation is accomplished, even intensifying for some hours subsequently, as to compel these sufferers to postpone to the utmost their devotions at the shrine of Cloaca. This procedure soon deadens the sensibility of the bowel, and obtunded feeling thereafter permits the constipation to persist, if not to increase. It is difficult to get such sufferers to listen to argument, or to try remedial measures other than those demanded by radical operation for cure of the causative disease.

The treatment of constipation naturally depends on its cause in each particular instance. Little time need be spent on the division first noted: there the physician must compel the observance of a well-mixed dietary, with special attention to antiscorbutics, and even the most stubborn patients will, through persuasion, gradually change their habit of eating, when the absolute necessity therefor is presented by their attendant. The addition of a light repast just before retiring, in which acid or sub-acid fruits prevail, with raw tomatoes, or the juice of that valuable esculent,—in lieu of the conventional beer, bread, mustard, and cheese,—will frequently stimulate the bowel in the morning when the hot coffee wakes up intestinal action and capillary circulation. I do not admit the ill effect of a late supper,—taken in moderation and of a proper kind,—and no one who knows the English yeomanry can dispute my position, for as types of rugged health and perfect complexion (which cannot exist in people packed with faecal refuse) they are unapproachable ; and they invariably retire on a comfortably-filled stomach.

The second class is harder to manage than the others, for bad habits, though readily formed, are difficult to overcome. Every effort must be made to establish a regular *daily visit* to the closet at a *definite time*,—just after breakfast being the best, —and, although no effect may at first ensue, do not let the patient respond to hints thrown out by the bowels at other periods. Should evacuation not occur to-day at the selected hour, wait, unless uncontrollable desire is experienced, until the *right time* to-morrow. The bowel is susceptible of high education, and it learns

to obey your behest when persistently solicited. It is usually necessary to assist the sufferer in such instances by medication, partly to conceal the main point,—the institution of a regular habit,—and also to tone up the flabby and debilitated mucous membrane and muscular coats of the lower intestine,—in fact, the whole tract in many instances. This therapeutic addition need neither be frequent nor strong; the great mistake made by patients and physicians alike is in resorting to cathartics under such circumstances. Allusion to the remedies suggested is deferred until after a word about the third class,—constipation from rectal or anal disease.

The proper method here is to eliminate the cause by operation, unless the patient declines positively, when the simplest plan is to employ an enema, and this preferably just before bedtime,—the object being to allow the person to get asleep before any pain shows itself, if possible. In some instances a non-constipating suppository of belladonna and iodoform will prevent the advent of such pain as would avert sleep.

To recur to therapeutics. Two methods are available in assisting the installation of a regular habit, one being medicinal, the other mechanical. My preference in the way of drugs is in most cases to give a single dose at bedtime only, studiously avoiding drastic or powerful cathartics, usually relying upon a drachm of cascara sagrada cordial simply, with one or two drops at most of tinct. belladonna, unless very lax muscular tone is evident, when the same number of drops of tinct. nux vomica is added. The effect is good in any case, but particularly in those persons who imagine that drugs are essential. In scrofulous subjects I sometimes add the one-hundredth of a grain of corrosive sublimate to each dose. In long-standing and stubborn cases I am very partial to the series of resinoids developed within the past twenty years by the eclectic fraternity, and of these leptandrin, juglandin, euonymin, and irisin are extremely valuable in combination in small doses, with at times the addition of ext. hyoscyamus. Should indication present, belladonna and nux vomica can be substituted singly, or the three conjoined. From inquiry among druggists and members of our profession, I find that any interest felt in these preparations in the past has abated, and that disuse of them has ensued, not

withstanding the exhaustive experiments of Rutherford and others, showing the admirable results obtainable from them as cholagogues and deobstruents without the pernicious results of the mild chloride of mercury, so much abused and so blindly resorted to, even at the present, in real or supposed liver-troubles. I have had such excellent results from the administration of these preparations as to urge heretofore and now a return to their use, and I feel the less hesitancy in so doing because of the corroboration of my views by our distinguished associate Dr. Horatio C. Wood, who stands not only unexcelled as a neurologist and therapist, but who, by his untiring and unselfish devotion to experiment and study, has thrown light upon many obscure phenomena in pathology, the results of which are appreciated and valued by not alone the profession which he adorns, but by scientists in every land,—a gentleman, withal, to whom supercilious and pedantic egotism, or jealousy, is foreign, and one ever ready with a kindly word for all, and a ready heart and hand for his fellow-workers.

In the way of mechanical treatment we possess important auxiliaries in massage and electricity. Most of my bad cases are directed to apply rapidly, for a few moments, a cold wet cloth to the abdomen, brushing the front and sides lightly, and drying with as rough a towel and with as much friction as the skin and comfort will permit. The patient is now thoroughly, by her own hands or those of another person, rubbed and kneaded over the entire abdomen, with special stress along and over the course of the colon. This manœuvre is exercised for some two to five minutes, the whole proceeding taking place just before the visit to the closet or when soliciting the evacuation. The effect is remarkable in all instances for good, and, when intelligently carried out, of main importance. The chief difficulty is to get patients to faithfully persist in stubborn cases, and to operate in winter, when, as one lady told me, "her belly was cold enough when disrobed, without dosing it with ice-water!" She persisted, however, and lost her constipation.

Electricity is beyond question intrinsically more valuable than any other remedy we possess in restoring tone to the intestine in long-standing cases. Contrary to general rule, faradism is here preferable to

galvanism ; but care is requisite in its application, that painful parietal muscular contraction does not occur. The small type of induction coil (as the Gaiffé) will not answer, the wire of the secondary being so fine as to abolish quantity, substituting therefore extreme tension. Under this condition the current acts mainly upon the integument and parietal muscles, and strong contractions, particularly of the external oblique and rectus, are very painful. To reach the intestine through the abdominal wall it is necessary to use a secondary of rather heavy wire; and my own inductorium is furnished with eight separate coils, six of these being of varying gauge and length of copper wire, one of German silver, and the high resistance of platinum.

With this arrangement, currents of any degree of tension, yet with sufficient quantity, can be had at pleasure, and the penetrating power approaches, though it does not attain, that of galvanism. The current should be rapidly applied over the whole abdomen, much as described in the remarks on massage, one pole brushing gently the parietes and the other over the solar plexus or the anus. The sittings should be frequent, and it is well to have a water-closet handy if you see the patient at your office, for sometimes the effect is prompt, as illustrated by what another of my patients once or twice said to me during the application: "Doctor, I want to go through the house!" that being her way of saying that something wanted to go through her.

I have already prolonged this paper so much (intending it only to fill a sudden gap in our meetings) as to prevent alluding further to points of interest ; but as it will, if spun out longer, prove almost as interminable as sometimes happens in the abnormal condition it refers to, I defer further suggestions to some future emergency, thanking you for your forbearance this evening.

246 NORTH TWENTIETH STREET.

#### THE VIENNA SCHOOL OF DERMATOLOGY.

BY HENRY WILE, M.D.

TO the Vienna School of Medicine is due the credit of being one of the first to bring order out of the chaos of facts and observations which characterized the

medical science a century ago. One of the main elements in the successful development of this school was the presence of an enormous clinical material. Another element, and perhaps as important as the one just mentioned, was the appreciation and cultivation of this material by master-minds. It is no matter of surprise that such a school became a centre of learning, as it did,—that its fame should go abroad and with peculiar magnetic power attract students from every quarter of the globe. The talents of a Rokitansky, the sagacity of a Skoda, and the genius of a Hebra, were each points of attraction in which the labors and efforts of centuries culminated. After these men passed from among the living their places were filled but in theory. It requires no great effort to see that in the development of the Vienna School, as in the development of every fabric of human society, a period of action is followed by a period of reaction ; a period of advance, characterized by power and brilliancy, is followed by a period of decline, in which nothing of importance is effected. At the present time the Vienna School is in this period of decline, and it seems as though the institution were merely resting on its laurels ; but in truth it is gathering strength for another advance.

I desire, however, to direct my remarks to the present condition of that department which more specially engages my attention. In no other department, perhaps, was growth so marked and astonishing as in that of dermatology. Indeed, the development of this branch of medicine in the Vienna School furnishes an important epoch in the history of dermatology. The clinic for diseases of the skin first acquired its prominence under the management of Hebra, whose successful leadership extended over a period of nearly forty years.

Hebra, having promulgated his principles against the opposition of his contemporaries,—who clung to tradition and to the wisdom of the ancients,—and succeeding in their establishment, assumed with justice and honor the place of a dictator. His opinions were received as law while living, and dead his writings still command respect.

The master was succeeded by a disciple, and the chair of Dermatology in the Vienna School is to-day occupied by Prof. Moritz Kaposi, a man of unquestioned ability, both as a teacher and as a writer.

In taking the position, however, Professor Kaposi has pretended to assume all the dictatorial power of his predecessor. This is made manifest both in the method of teaching and in the exclusive character of the principles of the pathology and therapeutics of dermatology which are here enunciated.

The method and manner of teaching is dogmatic in style: it sometimes savors of conceit. It is not long before the hearer becomes impressed with the idea that the good work is being continued only in Vienna, and that that which is done outside of the 'beautiful capital' is hardly worthy of honorable mention. Outside authority is only quoted to be brought to task for daring to disagree on some question with the Vienna School. The diseases occurring in this part of the world and brought into the clinic are taken as types which are supposed to exist everywhere, and from which a system of dermatology is expounded that is supposed to hold good the world over; than which nothing can be more ridiculous. To the student travelling in different countries and observing the diseases of the skin peculiar to the countries, nothing is more evident than the differences in type, and especially the relativity in respect to occurrence (frequent or rare), and the degree of severity with which the same disease attacks individuals of different nationalities.

An American student, going to Vienna, sees any number of cases of certain diseases which are comparatively rare in his own country,—e.g., favus, scabies, lupus vulgaris, and others.

Probably, next to eczema, scabies carries off the palm in Vienna, while in American clinics this is far from being the case. Bulkley, in an analysis of eight thousand cases of skin disease, gives but one hundred and twenty-eight cases of this disease, —one and six-tenths per cent. Cases of scabies frequently come into the clinic where, through mistaken diagnosis or delay in treatment, almost the entire surface of the skin of the patient is the seat of a violent dermatitis, caused by scratching. This is called by the significant term *eczema post scabium*, which is an exceedingly rare picture in an American clinic.

A peculiar fact connected with the occurrence of scabies in the Vienna clinic is that it seems to be confined more particularly to certain classes of apprentices; so

that the *Schuster* and *Schneider* boys will have their places in the history of this disease in Vienna. Indeed, a diagnosis may with a fair degree of certainty be made by the simple question of occupation. American students on the front seats at Prof. Kaposi's clinic will whisper "scabies" as soon as they hear a patient say "Schuster," and in ninety per cent. of the cases the diagnosis will be confirmed by the professor, who at the same word seizes the hand of the patient and brings the interdigital spaces in close proximity to his eyes. Discovering a burrow, he will march the patient around among the students to demonstrate the same.

Then, again, as to lupus vulgaris. Where but in the Vienna clinic can such a number and variety of cases be seen?—cases where the lesions occupy the mucous membrane of the larynx and epiglottis,—other cases where it is upon the face and extremities,—one case where it involves almost the entire surface of the body, which Prof. Kaposi thinks would be sufficient to furnish clinical material on this disease for several small universities. Cases of psoriasis universalis and prurigo are also common.

In reference to all those diseases common to both clinics, a striking feature presents itself in the fact that they here possess a certain degree of severity which is almost unknown in America. I here recall a conversation that I, before leaving for Europe, had with Prof. Duhring, of Philadelphia, in which he said, "You will see a different class of cases altogether from those you have seen in my clinic. They will impress you more on account of their striking, violent character." This is a fact which soon made itself apparent. I saw several cases of psoriasis universalis in the most aggravated form. One was the case of a little girl about eight years old, in which the entire surface of the skin, except that on the face, was affected.

In syphilitic affections there is no limit to the nature and variety of cases presented. Many of interest were those in which there was an induration on the lip, that was recognized as the initial lesion. One of these cases, a middle-aged man, it was said, came near being operated upon in the surgical clinic for epithelioma. Generally the diagnosis was verified by the treatment, that consisted of the application of a mercurial plaster, which in a short

time exerted its specific effect upon the induration. Where there is a doubt as to the real diagnosis between syphilis and epithelioma, a retrospective diagnosis is made,—*i.e.*, one made after the effect of the mercurial plaster is seen. If the plaster produces involution of the induration, it is pronounced syphilis; if not, epithelioma.

There is perhaps nothing which so eminently characterizes the Vienna School of Dermatology as its system of therapeutics. The successful employment of therapeutic measures in the treatment of diseases of the skin has here led to the development of a system in which a certain plan of treatment becomes identified with each disease, which plan is the result of a rich experience. For example, eczema, with its division into stages, has its special mode of treatment. In one stage, where there is much irritation and swelling, diachylon ointment is recommended; in another stage, where the inflammation has subsided, and the swelling gone down, but where there is still congestion and troublesome subjective symptoms, itching, etc., tar in some form, especially fluid, is prescribed. In the acute stages, where there is considerable weeping, some simple dusting powder, as amyrum, is ordered, to absorb the moisture and keep the parts dry and unirritated.

Lupus vulgaris has also its own plan of treatment. The lesions are first washed with strong liquor potassæ, to remove the epidermis, then the new formation is destroyed with nitrate of silver. The stick of caustic is applied with some force, care being taken to dislodge only the diseased tissue, and not to injure that which is sound, remembering that lupus tissue is soft compared with healthy tissue, and easily broken down.

For the treatment of severe cases of pemphigus vulgaris, and extensive burns of the second degree, the continuous water-bath is used. This bath was introduced by Hebra, and consists of a tank in the form of a bed, in which is suspended, by means of chains, an inclined plane. Upon this plane the patient rests. It can be raised or lowered to any angle, by means of a revolving shaft around which the chains are fastened. The top can be covered over with a wire screen upon which a blanket is stretched. In this bath patients remain, eating, sleeping, reading, etc., sometimes for weeks. In cases of

extensive burns this treatment is said to be exceedingly satisfactory. The patients complain at first of increased burning pain, but the feeling soon subsides into one of great comfort.

In the treatment of syphilitic diseases of the skin, all the modes ever invented are used for demonstration in the clinic, but the mode specially preferred and adopted by the Vienna School is that by inunction. It is claimed that by it the best results are obtained with the least amount of constitutional disturbance and pain to the patient. Zittman's decoction and iodide of potassium are occasionally administered in obstinate forms of the disease, besides the inunction.

Except in syphilitic disease, very little medicine is administered internally in the treatment of skin diseases; the main reliance is placed upon local applications.

Besides the regular clinic for skin diseases, there is in the same hospital (Allgemeines Krankenhaus) a division for syphilis, under the efficient management of Prof. J. Neumann. In this clinic one may see a great variety of diseases of the skin, but more especially those of a syphilitic nature.

The method of teaching employed by Prof. Neumann is peculiarly attractive and worthy of great merit, on account of the particular attention that is paid to the matter of differential diagnosis.

Thus there are in the Vienna School two large clinics for the study of diseases of the skin, and, as far as the quantity of material is concerned, their advantages are perhaps unsurpassed. The most important point for the student in connection with the clinical study of dermatology is to see a great number of cases, first in order to study the course and development of the respective diseases, and second, having different diseases, resembling one another in their manifestations, side by side, to compare them closely for differential diagnosis. This can be done at the Vienna School of Dermatology; and for this reason alone, if for no other, it will continue to attract students as it always has done in the past.

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NEW CUPREA BARK, derived from localities in Colombia where it had not been collected previously, has lately arrived in Europe in small quantities. Large supplies of this important source of quinine will probably arrive in the course of time.—*New Remedies*, June.

## AN OBSTETRICAL EXPEDIENT.

BY V. M. REICHARD, M.D.

THERE is an expedient which I have used with such great advantage that I wish to lay it before the profession, that some other may be relieved as signally as I have been. To illustrate, I will give a few cases:

*Case I.*—Mrs. W., colored, æt. 35. In labor with eighth child. Always had easy labors. Membranes spontaneously ruptured several hours before my arrival. Pelvis large and roomy. Head rather small. Parts relaxed and os dilated. Pains good, but head would not engage properly. In the interim between two pains, the head would go back, and could scarcely be felt. After waiting several hours, I determined to take her up. Placed her on her knees by the bed, and in about fifteen minutes the child was born. No bad result.

*Case II.*—Mrs. L., white, æt. 52. In labor with tenth child. Youngest seven years old. Dilatation retarded, pains feeble. Gave chloral and quinine. After waiting several hours, the head engaged, and all passed well until the vertex was about to sweep under the pubic arch. There it stuck. Extension could not take place, and the child could not be born. Her pains were now good, and an extensive *caput succedaneum* was forming. I waited till I feared for the life of the child, when I urged the forceps. To this she strongly objected,—absolutely refused. As a *dernier ressort*, I put her on her knees by the bed. The effect was perceived at once: the anterior part of the head went back against the perineum, and the occiput swept under the arch. The space gained could easily be recognized. The caput had previously covered all the part which could be detected by the finger, but now the cranium could be felt all around it. Extension took place, and she was speedily delivered.

*Case III.*—Mrs. R., white, æt. 22. Second child. Membranes ruptured. Woman very stout, and abdominal tumor very large. Found head engaged and fitting tightly. When on her back, the foetus would fall towards the spinal column; when on the side, it would fall laterally. Could not keep it in the axis of the pelvis, and her labor would not advance. Absolutely refused the forceps. Put on her knees by the bedside. In this posture the foetus kept its position, and, the uterine forces being applied with advantage, delivery was speedily accomplished. This case was complicated with adherent placenta and hour-glass-contraction; but, as she had suffered with this in her previous labor, it could not have been the result of the position.

These three cases illustrate several of what I consider the indications of the knee position in labor. All the writers on ob-

stetrics speak of the advantage to be gained by sitting, standing, and walking around during the first stage of labor.

None, so far as I have seen, advise this. Atkinson\* says the position on the knees is used in Ireland. Engelmann† has shown us that the almost universal primitive position is to have the body either completely or partially upright. While preparing this, I was told by an old professional friend that Meigs‡ details several cases where he resorted to this position. In the systematic works of Ramsbotham, Leishman, Churchill, Playfair, Meigs, and Lusk, I have found nothing except the horizontal position recommended for the second stage of labor. In all my cases the dorsal and right and left lateral decubitus were successfully tried, and with no permanent results.

In none of my cases was delivery so rapidly accomplished as in the first. The child was born almost before I was aware of it, and that after I had waited for several hours with the woman in bed. Had the forceps been used in this case it would not have been devoid of danger, as their passage into the uterus would have been necessary. In the second case the delay was due to the rigidity of the parts. The head could not pass sufficiently far back to allow the vertex to sweep under the pubic arch, and hence the delay. By changing the direction of the uterine action the necessary space was gained. With the forceps the same result could have been accomplished more speedily, but she utterly refused them, though urged by myself, her husband, and the nurse. In the third case the delay was due to the relaxed abdomen and the trouble in keeping the foetus in the axis of the pelvis. When in the upright position there was no trouble of this kind, and her labor advanced to a speedy termination.

In these cases the placenta may be delivered while the woman is on her knees, or she may be put back to bed first. If there is no delay, the better plan is to remove it before putting her back, as by so doing a great deal of filth and dirt will be kept out of the bed. The woman will not be soiled, or compelled (as is so often the case) to lie in a pool of her own discharges. Indeed, one great advantage is the keep-

\* Hints in the Obstetric Procedure, p. 36.

† Obstetrics among Primitive Peoples.

‡ Letters to the Class.

ing of the bed clean. Some women will object to this position because they are too weak, others because it is indelicate; but by stating the case clearly, and using some tact, the attendant ought to have no serious trouble in having his wishes carried out.

FAIR PLAY, MARYLAND.

THE DISPENSATORY OF THE  
UNITED STATES, FIFTEENTH  
EDITION, 1883.

BY W. THORNTON PARKER, M.D.,  
Acting Assistant-Surgeon U.S.A.

WHEN a new edition of a great work like the United States Dispensatory appears, after having undergone careful revision, it must be expected that criticism and even fault-finding will be made in regard to it. I beg to call attention to what seem to me to be some errors and omissions concerning a few medicines which have proved valuable in practice.

*Quinæ hydrochloras* (p. 1219). It is stated that "this is another new officinal quinine salt, for the introduction of which there seems to be no good reason, as the medical properties and uses are precisely those of the sulphate."

The valuable properties of *quinæ hydrochloras* have been very ably shown by Dr. Mixsell.\* I have also added my testimony to its value.† It is useless to claim that the "medical properties and uses" of this drug "are precisely those of the sulphate." Careful investigation will prove that the hydrochlorate is very much superior in its action, more rapidly absorbed, less likely to cause disagreeable head-symptoms, and also, from its ready solubility in water, more convenient in practice. In fact, in cases where the sulphate cannot be used at all the hydrochlorate seems to do well.

In Germany, where I first learned to appreciate its good qualities, it is a great favorite. It is best prescribed in capsules. In much smaller doses than the sulphate, it has been found equally beneficial.

Concerning *chlorate of potassium* (p. 1162), there is no distinction made between it and the *kali chlorici* so commonly used in Germany, which is, in fact, a much milder preparation than the chlorate.‡

\* Medical News, March 31, 1883.

† Medical News, April 28, 1883.

‡ Medical Record, January 20, 1883; Medical News, May 19, 1883.

The *kali chlorici* will be found a very agreeable and efficacious remedy in common sore throat, for which it is considered almost a specific; whereas the chlorate of potassium is very apt to be too severe, and to have a very injurious effect upon the stomach.

No mention is made of the use of the *sulphate of magnesia* in dysentery, as recommended by Dr. W. H. Thayer, of Brooklyn, neither is there anything said of the value of *tannate of iron* in diarrhoea. By far too little notice is taken of *diaxylized iron*, and nothing is said of the value of inunctions of *olive oil* in chest diseases.§

*Tartrate of sodium* (p. 1762), receives some attention. It is, however, best given in the form of Brewer's Effervescent Tartrate of Soda.

*Sulpho-carbonate of zinc*, although not mentioned, is in fact a very valuable preparation, and is to be preferred to all other astringents for injections in gonorrhœa and leucorrhœa.||

In conclusion, it is very much to be regretted that *boro glyceride* is not mentioned as an antiseptic. It would surely seem to have won the right to be classed with carbolic acid and iodoform, if not recognized as being immeasurably superior to both.¶ I trust I may be pardoned for taking upon myself to criticise a work to which every physician may be thankful to have access, and which is indeed not only a credit to its compilers and publishers, but an honor to the American medical profession.

FORT ELLIOT, TEXAS, June 2, 1883.

AN EXPERIMENTAL RESEARCH ON  
THE UTERO-PLACENTAL CIRCULATION.

DR. J. P. PYLE presented as a graduating thesis at the last annual commencement of the University of Pennsylvania a memoir with the above title. It is designed, as soon as practicable, to publish the paper entire, as it seems a scientific contribution of decided value. The conclusions the author deduces are formulated as follows:

"Nineteen experiments were made with ultramarine blue. In each instance the

§ Medical Times, December 30, 1882.

¶ Boston Medical and Surgical Journal, March 3, 1881.

|| New York Medical Record, September 2 and 23, 1882.

blue, which had been introduced into the circulation, was found widely distributed in the maternal organs. The total number of foetuses obtained from these animals was sixty-one. Of these, forty-six gave positive results, *i.e.*, the foetal tissues were impregnated with blue granules in varying quantity. Only fifteen of these foetuses gave negative results.

"Of the placentæ only fifteen were examined, thirteen of these showing blue granules, the remaining two giving negative results.

"Of the thirteen umbilical cords examined, eight gave positive and five negative evidence. I regret that, owing to circumstances beyond my control, the remainder of the cords and placentæ were not examined.

"It is also seen that ten experiments were made with septic poisonings with the object to study the transition of bacteria from the mother to the foetus. The maternal tissues were in every case impregnated with bacteria. Of the thirty-nine foetuses examined, in every one identical bacteria were discovered. Eight of the placentæ gave positive results, as well as seven of the umbilical cords examined.

"The control experiments, two in number, made with the object to determine whether or not the bacteria were of an accidental occurrence, gave negative evidence. It is true that putrefactive bacteria do occur in animals after the lapse of a certain time after death, and this I observed in the blood from the heart of the animal which was examined eighteen hours after death. But even here the foetuses were free of them. Moreover, it can be seen from my experiments that the examinations were made immediately after death, or within a few hours, and that only bacteria pertaining to septicæmia (micrococci) were seen, and not the organisms of putrefaction, which are dumb-bell-shaped and rod-like. The few negative results are certainly of no significance in contrast with the many positive observations, especially in view of the difficulty in making the examinations.

"The observation in the human being, which I had the exceptional opportunity to make, I regard of still greater importance than all the experiments combined. As elsewhere described, I have observed that the bacteridian disease of the mother is transmitted to the foetus. The examination

of the foetus, which was removed by Cesarean section, was made one hour after the death of the mother. In this case, also, the bacteria in the blood and tissues of the foetus could surely not be accidental.

\* \* \* \* \*

"I think that Cohnheim's theory of the migration of white blood-corpuscles, which has lately been proven by himself to be a mere passive process of filtration through the blood-vessel walls, is a fair analogy to what we may find in the transmission of solid particles through the attenuated utero-placental walls."

## NOTES OF HOSPITAL PRACTICE.

### UNIVERSITY HOSPITAL.

*CLINIC OF JOHN ASHHURST, JR., M.D., PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF PENNSYLVANIA.*

Reported by LOUIS J. LAUTENBACH, M.D.  
*UMBILICAL HERNIA.*

THIS woman, apparently about the middle period of life, presents a case of umbilical hernia. This affection, which is also called exomphalos, is quite common in the new-born child, in whom it often occurs as the result of mismanagement of the cord on the part of the nurse or attendants.

In the infant the disease can almost invariably be cured by the adoption of means to keep the sides of the umbilical ring together. The employment of a sole-leather pad or of a copper cent, and the method which I usually adopt, that of Fergusson, by the use of adhesive plaster alone, all are efficient. The hernia is to be reduced, the sides of the ring pressed together, and the part then covered by a few broad strips of adhesive plaster. By such means you can generally effect a cure.

The next class of patients in which we often meet with umbilical hernia is that of women who have borne a number of children. Sometimes the hernia attains a very large size. In one case which I remember, there was a very large protrusion, which consisted of an immense mass of omentum. When the patient sat down, the tumor rested on the chair between her thighs. The hernia was irreducible, and all that could be done was to apply a bag.

Operations for the radical cure of umbilical hernia are sometimes performed, but, like similar operations in other parts, they are attended by the risk of peritonitis,

and, moreover, frequently fail; so that I do not recommend them.

When we take into account the risk of all these operations, and the fact that the truss affords such a satisfactory means of giving relief, it does not seem worth while to seek anything further.

In umbilical hernia I do not think that the ordinary form of truss is as convenient as an elastic belt with an india-rubber air-bag to be applied over the seat of hernia.

Sometimes the protrusion is not at the umbilicus, but at another part, usually in the median line. This is what is called "ventral hernia." It usually results from some straining effort, as in child-birth, from an injury, or from carrying heavy weights. It is not uncommon in soldiers, in whom it occurs as the result of carrying heavy knapsacks on long marches, necessitating prolonged exercise of the abdominal muscles. In these cases the ventral opening is usually small, and the hernial sac is commonly empty.

If strangulation should occur either in umbilical or ventral hernia, the rule is, if possible, to effect reduction by manipulation or taxis; if you do not succeed by the ordinary method, then make a small incision on one side of the median line, and by means of the probe-pointed knife divide the constricting band, being careful to do this, if possible, without opening the sac. This operation is an application of Gay's method of herniotomy in femoral rupture. If the sac be opened, the operation will almost certainly be followed by general peritonitis.

#### *EPITHELIOMA OF PREPUCE.*

Our next patient thinks that he had some form of venereal disease eight or nine years ago, but his history is not very clear.

We see now a condition of great hypertrophy of the prepuce, but not accompanied by true phimosis. We see several openings which discharge a lympho-purulent fluid. At first I thought this might be one of those rare cases of lymphorrhœa, an affection which bears some relation to that form of elephantiasis Arabum which is connected with enlargement of the lymphatics.

There is great thickening and induration occupying the lower part of the prepuce; there is one opening anteriorly, one below, and one above, all discharging a somewhat purulent fluid. When the prepuce is pushed

back, we find a great deal of induration and ulceration between it and the glans.

The age of the patient is rather against the suspicion of malignant disease, and yet this is what it appears to be. I do not believe it to be a gumma, as this could scarcely have existed for eight or nine years without change.

By slitting up the prepuce, so as to thoroughly expose the parts, we find that the disease is principally limited to the prepuce, not involving the glans except very superficially. The diseased structures are readily excised, using Ricord's forceps as a guide for the line of section, and introducing sutures before cutting off the affected part, so as to be able at once to control the bleeding.

[Subsequent microscopic examination showed the disease to be an example of epithelioma.—*REP.*]

#### TRANSLATIONS.

**HEMORRHAGIC PERICARDITIS.**—A man, 85 years of age, usually of good health, four days before coming into the hospital complained of a cold in the head, of coughing at night, and of loss of appetite. At the same time, he noticed difficulty in breathing, and his legs began to swell. Upon admission he was somnolent, the face was cyanosed, his pulse was irregular and unequal; the heart was decidedly irregular, and there was dulness with feeble breathing over the base of the left lung. Temperature normal. Dyspœa increased rapidly, and he died the same evening.

At the autopsy, recent pleural effusion containing fibrin was found in moderate quantity in the left chest. The pericardium was thickened and distended; from it was obtained about five hundred grammes of bloody serum; the inner wall of the sac was lined with a honey-comb deposit of recent lymph; there were no recent or old adhesions. The heart was fatty, dilated, and enlarged, covered by a heavy layer of fat; its muscular tissue was pale, and the walls thin. No valvular disease. The coronary arteries were permeable.

Dr. Butts, who reported the case before the Société Anatomique, in calling attention to the complication of dilated fatty heart with pericarditis, which, indeed,

generally exists, gives his opinion that in this case the pericarditis was not secondary, but primitive, on account of the rapidity of development of the cardiac symptoms, the abundant effusion being sufficient to cause the dilatation and fatty degeneration. The occurrence of the left-sided pleural effusion he considered as the rule in pericarditis, and as secondary in this case, the relative abundance of the pericardial fluid supporting this view. During life the pleural effusion led the attendant to overlook the pericarditis, the condition of the patient not warranting extended examination; but the sudden appearance of irregular pulse, with œdema, dyspnoea, and cyanosis, should have led to the suspicion of heart-disorder.—*Progrès Médical*.

MULTIPLE FIBROMATA OF SKIN, WITH DEVELOPMENT IN LARYNX AND PERICHONDRITIS—DEATH FROM TUBERCULOSIS.—A case is reported by Th. Hering (*Wien. Med. Presse*, No. 2) of a man whose general surface was adorned by about fifteen hundred fibrous tumors, some as large as a hen's egg, and who also suffered with pulmonary tuberculosis. Subsequently, hoarseness, dyspnoea, and difficulty in swallowing directed attention to the larynx, and led to an examination. A large growth was found in the neighborhood of the left arytenoid, and under the vocal cords was seen a cherry-sized, reddish-yellow tumor, which above was smooth and slightly granulated at its sides, which nearly closed the lumen. Tracheotomy was performed. In a few days a pulmonary hemorrhage occurred, which caused death. Post-mortem examination showed pulmonary tuberculosis. The tumor in the larynx, which was apparently also tuberculous, communicated by a small canal with the necrotic processus vocalis. Near this tumor was a growth as large as a hazel-nut, which under the microscope was recognized as a soft fibroma like that which was found under the vocal cords.—*Centralblatt für Chirurgie*, No. 20.

TUBERCLE BACILLI IN CHILDREN'S DISEASES.—Dr. Demme finds that the catarrhal pneumonia accompanying or following measles and whooping-cough affords exceptionally good conditions for the deposit and development of bacilli. In cases which do become tuberculous the bacilli appear at first isolated in the sputum, but as the

tubercular pneumonia develops they become proportionately increased in numbers. The expectoration in acute miliary tuberculosis, on the contrary, does not contain bacilli. In the ulcerative form of lupus vulgaris bacilli may also be detected, although rarely.

In one of those very rare cases of tubercular disease of the nasal mucous membrane reported by Demme (*Berl. Klinisch. Wochenschr.*, No. 15, 1883), bacilli were detected in the nasal discharge. The case is a very interesting one. A boy, 8 years of age, died of an acute meningitis, the autopsy demonstrating tubercular meningitis of the base of the brain. The glands in the lungs, bronchi, and mesentery were free from tubercle; on the surface of the mucous membrane of the right nostril were a few grayish-yellow nodules of tubercle. There was no history of inherited disease. The malady was attributed to direct infection from a nurse who was suffering with pulmonary phthisis, and the opinion is not an untenable one that the bacilli were carried directly from the nasal mucous membrane to the pia mater of the base of the brain, causing the tubercular meningitis.—*Deutsches Medizinal Zeitung*.

TRICHLORPHENOL IN ERYSIPelas.—The daily application of a solution of trichlorophenol (five to ten per cent.) by means of a brush to an erysipelatous surface has been accompanied by excellent results in the hands of Dr. Jurinsky. With the disappearance of the erysipelas the temperature declines; in several cases this occurred in forty-eight hours after the first application.

—*Jeschedelnaia Klinitschkaia Gazeta*, 1883, No. 5 (Russian), and *Centralblatt für Chirurgie*, No. 19.

PARALYSIS FROM NEURASTHENIA AFTER BILIARY COLIC.—Two cases of hepatic colic accompanied by severe neuralgic pain in the right arm, and followed by temporary paresis of both motion and sensation in the arm, are reported by M. P. de Gennes in *La France Médicale* (No. 55). The neuralgia of the arm was considered as consecutive to a neuralgia of the phrenic nerve.

PRECOCIOUS DEVELOPMENT OF UTERINE CANCER.—In *Virchow's Archiv* (B. xcii. H. 1), Prof. Rosenstein reports a fatal case of carcino-sarcoma uteri in a child two years of age, in which symptoms had first been noticed three months before.

PHILADELPHIA  
MEDICAL TIMES.

PHILADELPHIA, JULY 28, 1883.

## EDITORIAL.

## CHOLERA ADVICES.

THE daily dispatches from the East giving detailed accounts of the spread of the cholera epidemic are naturally exciting much attention, if not alarm, in this country, as well as in Europe. Side by side with the reports of its progress in the columns of the daily press, advertisements of cholera specifics have commenced to appear, and in the editorial columns are found words of counsel as to the best means of treatment in cases attacked by the disease, and how to behave during the epidemic, which, while they indicate the popular interest in the subject, are very far from being reassuring to the public. This feeling of an impending danger is so universal that in the choice of summer-resorts families are now taking into consideration hygienic conditions more generally than probably was ever done before. In so far as this leads to increased private and public attention to the practical application of the principles of sanitary science and state medicine, and a better appreciation of their importance, it is calculated to do a great amount of good. Public sentiment for the time supports the various health-boards, and means will be willingly provided for the needed improvements and details of sanitation, which on ordinary occasions are too commonly treated by communities with indifference and neglect. The impetus given to sanitary work may, therefore, to some extent be regarded as an indirect compensation for the existence of epidemics; the influence for good thus transcending the actual limits of prevalence of the disease, just as electrical disturbances extend far beyond the track of a storm.

The history of previous epidemics of cholera shows that a number of years have, usually, been required for its progress around the world. The great epidemic which commenced in JESSORE in 1817 did not reach England and the United States until fifteen years later. Since that visitation, however, there are good grounds for believing that the disease has become endemic in many of the large centres of population both in Europe and America, and, where the conditions are favorable for its development, cases of greater or less severity occur in such places every year. Having finally become naturalized in the country, it has been observed that later epidemics are much more extensive and rapid in their march than the first, which took six months to travel from the Atlantic coast to New Orleans. On the other hand, it must be remembered that the means of inter-communication have been greatly multiplied and modes of transit are more rapid and less restricted than ever before; so that the cholera in its march no longer moves in stately course with the slowness of a caravan or the steps of Salathiel.

The probabilities are that the epidemic, if it is to come here at all, will not reach us before next summer; the injudicious attempts to create a panic among the people by sensational publications should therefore be disconcerted by the medical press, at the same time that every encouragement is given to the general adoption of prophylactic measures and the enforcement of sanitary requirements, especially among the great cities along the seaboard.

Authorities generally are agreed that the great carrier of contagion during cholera epidemic is an infected water-supply. The Broad Street pump during the invasion of 1854 in London has become almost classical, since the conclusive demonstration of Dr. Snow, as the local source of many cases of the disease; and Frankland and others have shown that the mortality from cholera

in London during the last two epidemics was connected directly with the amount of contamination of the water. It is generally directed, therefore, that when cholera is epidemic all drinking-water should be boiled previous to use; and careful attention to this would doubtless reduce the number of patients. But attention to the drinking-water is not enough; *all* water employed for household purposes should be raised to the boiling temperature, in order to render the disease-germs innocuous, before it is used. As pointed out by Lebert, it is just as important that the water used for washing dishes should be germ-free as that which is used for cooking or drinking. We consider it of especial importance that dairy-men and dealers should conscientiously refrain from diluting milk with water which has not been previously boiled, even though every other precaution be taken to insure its purity; but we know of no means of enforcing such a necessary measure.

The Schuylkill water, enriched by the drainage of a large and well-populated section of the country, is still not so very bad; the volume of water is so large, and other natural conditions are so favorable to the purification of the water, that the danger of sickness from this source is not so great as in some other great cities similarly situated. But there are still to be seen in certain parts of Philadelphia, at the corners of streets, pumps, the clear, cool waters of which, sparkling with nitrates, are much sought after by neighbors, and by thirsty laborers on their way to work. There are also, in the cemeteries around the city, pumps from which infusion of dead ancestors is constantly drunk by thoughtless or reckless visitors.

We are reminded that Pasteur found that the earth in which the carcass of an animal dead from splenic fever is buried becomes infested with active germs, which may be even carried to the vegetation above it, so that other animals grazing in

the vicinity may thus be infected with the disease. Dr. Domingos Freire insists that burying-places are hot-beds for the growth and dissemination of yellow-fever germs, and demands that the bodies of all persons dead of yellow fever shall be cremated. It would undoubtedly be advisable to carry this out as a measure of public safety in all cases of infectious disease; but as long as these bodies continue to be buried, it seems worse than blind folly to allow unsuspecting children to drink the water that percolates through a crowded grave-yard. We hope to see every pump that is in the closely-populated portion of the city at once removed, and on strictly scientific and sanitary grounds call for the passage of an act with severe penalties against the use of pumps in cemeteries, whether we are to have an epidemic of cholera or not.

#### SUMMER DRINKS.

IN looking over the mortuary records of Philadelphia of some years ago, attention is arrested by several cases of "death from drinking cold water;" subsequently the statistics are silent on the subject; there are no more deaths attributed to this cause. To the thoughtful mind, there is food for reflection here. Were there reasons why water-drinking was especially fatal at that period? If not, why are no more cases recorded? Has cold water lost its fatal properties, or have we ceased to be a water-drinking people? Possibly the coroner at this early date had not yet discovered that most prevalent and convenient condition, "fatty heart," which, at the present day, is so generally returned as the cause of sudden decease. It is also more than probable that people still die of cold drinks during hot weather, the proximate instead of the exciting cause being entered in the death certificate, such as syncope, congestion, collapse, diarrhoea, etc.

Although a fatal result may not occur frequently, yet there is unquestionably much sickness and suffering caused by the American habit of freely using iced drinks in hot weather for the purpose of reducing bodily temperature when overheated by exertion. That they are popular may be inferred from the signs displayed along the streets intended to attract the public, such as "Soda-Water with Ice-Shavings," "Ice-Cream Soda," "Mineral Waters at 32°," "Ice-cold Brown Stout," "Beer on Ice," "Iced Lemonade," "Iced Tea," and a host of others, with which men insult their stomachs even during the process of digestion.

The excessive use of ice-water during the summer appears to be one of our natural characteristics. How many cases of shock, collapse, acute indigestion, colic, supposed summer cholera, and diarrhoea have been caused in this way it is impossible to compute. That permanent digestive troubles may also ensue is a matter of common experience, and thus life be made miserable, and materially shortened, even though death be not immediately caused.

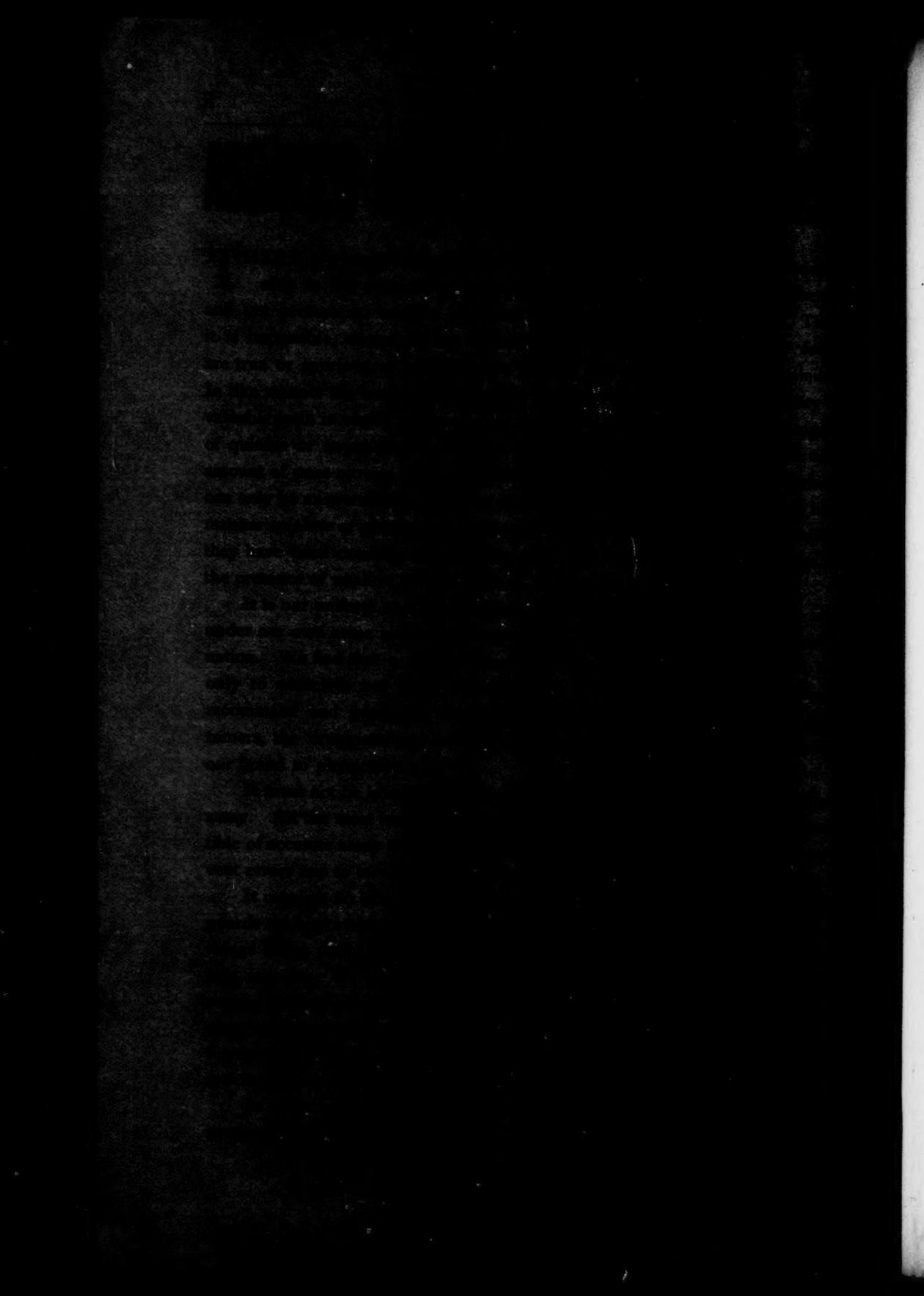
While protesting against the current abuse of iced beverages in hot weather, which we feel bound to do from observation and experience of their bad effects, we would recommend a more temperate and rational employment of ice. It is not necessary that fluids should be cooled to the freezing-point in order to be acceptable; the ordinary temperature of cool spring-water is usually as low as can safely be drunk in summer with due regard to the stomach. Soda-water as commonly sold may be not much better than poison, as it too often is contaminated to a dangerous degree with copper, as stated by a correspondent in our last issue. Koumyss ought to be more popular as a summer drink; and fresh buttermilk, or sweet milk and Vichy water, would be very acceptable, and, at a reasonable temperature, not injurious. Sweet cider in moderate quantities, genu-

ine raspberry vinegar, lemonade, are also grateful and refreshing. The only objection to lager beer as a summer drink is the alcohol which it contains. The great desideratum for a popular summer beverage we should consider to be one that shall have the pleasant bitter taste of beer without the heating effects of the alcohol. The bitter is a pleasant tonic, but in this form the drink may be regarded by some as too tonic.

#### THE THERAPEUTICS OF SEA-BATHING.

THE fact that many persons derive great benefit from sea-bathing shows that it is capable of modifying nutrition in a decided manner; and, in truth, its hygienic and restorative effects have long been recognized and appreciated. Since the tonic and invigorating qualities of the sea are so evident in some cases, it is quite possible that in conditions where it is unsuitable it may be equally potent for harm; and physicians have frequently had brought to their attention patients who had thus been injured rather than benefited. It would seem as if the personal factor must enter into the determination of the problem, and idiosyncrasy very largely affect the results; but there are certain general conclusions founded upon experience, which may serve as a guide when the family physician is called upon for his opinion as to the effects of sea-bathing in a particular case. There are, however, so many incidental and necessary conditions to be taken into consideration that, after all, very much must be left to the prudence of the bather. The water varies greatly in temperature: on some days it is quite warm, on others it is so cold as to cause considerable shock; it is sometimes rough and sometimes smooth; the advisability of bathing is necessarily very much influenced by such circumstances. Generally speaking, the effects of sea-bathing are unfavorable to





persons of delicate constitution, and to those in whom for any reason reaction does not take place readily. Young infants should not be taken into the surf on this account, and larger children should not be allowed to remain in until they are chilled. Sea-bathing, on account of the stimulating impression upon the nervous system and circulation, should not be undertaken during active digestion, nor at any time by plethoric persons or those in whom congestions of internal organs are to be feared. Among contra-indications may be classed marked diseases of the kidneys, liver, heart, or brain; and menstruation and pregnancy are conditions as unfavorable as albuminuria. Persons subject to hæmoptysis must use great caution in bathing in the sea; and anæmic subjects are liable to have symptoms of collapse from imperfect reaction. In elderly persons with rigid arteries, when the system is unable to react promptly, a bath may be attended by serious consequences, and, if the degeneration of vessels is decided, syncope or apoplexy may occur while in the water, or a fatal congestive chill may follow.

The question whether a phthisical subject will be benefited at the sea-shore, should be answered with caution. Undoubtedly some cases have been greatly benefited; it is also, unfortunately, true that in many others the downward course is only hastened by the bracing, moist sea-air. If the disease be at all advanced, the chances are that the sea-shore would, as the rule, be a bad place for a consumptive; if, on the other hand, the disease is just beginning, possibly the favorable influence upon general nutrition may more than counterbalance the evil effects upon the lung. To persons in ordinary health, who have been fatigued by business cares and overwork, or to others recovering from sickness, under suitable precautions and proper care sea-bathing exercises powerful and prompt restorative effects. It increases tissue-change and

excretions, and is therefore a valuable alterative; it improves the appetite and favors digestion, and is therefore a tonic; it quickens the circulation and invigorates the nervous system, and is therefore a general stimulant; but these advantages apply only to appropriate cases; in others injurious effects more or less permanent may follow.

#### NOTES FROM SPECIAL CORRESPONDENTS.

##### CHICAGO.

THE committee appointed by the Chicago Medical Society to confer with the State Board of Health, for the purpose of securing the appointment and organization of a State Board of Medical Examiners, made a report at the last meeting of the Society. The committee, after careful investigation, decided that the necessity for such a Board was beyond any question, as the present arrangement too often defeats proper regulation of the Practice Act. The purpose of the new Board would be the examination of *all* persons proposing to practise medicine in this State, independent of any documentary evidence presented; and, to secure impartial action, the Board is to be constituted of able men having no connection whatever with the medical colleges. The committee in their report present, as the result of an examination of the files in the office of the Secretary of the State Board of Health, the following as a specimen:

\_\_\_\_\_, ILL.  
"TO THE SECRETARY STATE BOARD OF  
HEALTH DEEAR SIR I sent you my diploma  
early last march and have not heard from it  
sinc did you receive it or do you know any-  
thing about it I am becoming quite anxious  
concerning its safety My diploma is from  
\_\_\_\_ Medical College \_\_\_\_ dated \_\_\_\_  
1882 I also sent you a letter containing a one  
dollar bill to pay for the certificate If you will  
give me the information I requist I shall be  
greatly obliged to you

Your's very respectfully

\_\_\_\_\_, M.D."

"It is a sad reflection, that a man who has misspelled above ten per cent. of the words of this simple letter above quoted, holds a diploma signed by the faculty and officers of a recognized medical college."

The committee state that they have the authority of a member of the State Board for saying that there are on file in its office

not less than two hundred instances of graduates in medicine who cannot spell "diploma." The following examples of the different ways are given: diploma, diplomy, diplomer, diplomah, diaplemy, diapituma, diploma.

To secure a better spelling of this word, it is proposed to have one common Examining Board on preliminary education, for all the medical colleges in the State.

The annual meeting of the Board of Directors of the Chicago Floating Hospital Association has just been held, and an efficient staff of officers elected. The hospital boat will run during July and August, making three trips daily. The number of mothers and children receiving benefits last year was over nine thousand.

June 21, 1883.

## PROCEEDINGS OF SOCIETIES.

### PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall, northeast corner of Thirteenth and Locust Streets, on Wednesday, April 25. Dr. Horace Y. Evans read his address as retiring President, as follows:

#### ADDRESS OF THE RETIRING PRESIDENT.

MR. PRESIDENT AND GENTLEMEN.—Having been honored with the office of President of this Society, I now, in compliance with your established custom, beg leave to present my retiring address. The year just closed has been marked by an increasing interest in the advance and development of our knowledge of the art and science of medicine.

It has been my privilege to attend the meetings of this Society for nearly twenty years, and never during that period has there been such an earnest delving and progressive spirit as is now manifested.

We seem to be on tiptoe, sceptical of the present, scanning the future; rejecting the old, adopting the new; advancing on the untried, falling back upon the accepted; again advancing, reconnoitring in the dark, feeling our way; catching at straws, watching the atoms, interrogating every ray or spark as to its ability to enlighten the mystery; expunging the canons of the fathers, yet eager to unearth and scrutinize the old foundations; shy of empiricism, yet at times coqueting with her, knowing that the wrecks marking her blind career have revealed to us both Scylla and Charybdis.

In no branch of science has the investigator such a labyrinth to explore, or such complex laws to discover and organize, as has the devotee of the curative art. He has to deal with the being made after the likeness of its divine

Creator, wonderful in beauty, consummate in perfection, and complex in organism, possessing a dual life, psychical and physical, coexisting the one with the other, and fully comprehensible only to its author.

Need we wonder, then, at the superstition and mystery enshrouding the early history of medicine? Does it not magnify our mission when we recall the fact that the ancients deemed it so divine a pursuit that none but the gods could comprehend it? For centuries the mythological deities, Isis, Horus, and Apis, monopolized the entire realm of medicine, only occasionally revealing its mysteries to favorite priests in their temples.

To these men was committed the practice of medicine. They were the magicians in the times of the Pharaohs, and were, indeed, the powers behind the thrones, dictating to kings. To the Greeks we are indebted for having presumed to grasp the divine knowledge and brought it within the comprehension of mortals.

Since then its history has been one of constant travail, pregnant with vital realities, yet tedious and laborious in development, requiring eternal vigilance on the part of its devotees.

Pythagoras, Hippocrates, Celsus, and Galenus labored not in vain. Each faithful worshipper at the shrine received new inspiration.

To-day the accumulated facts of ages are at our disposal. Still there are labyrinths to explore, and problems to solve. Never were the prospects brighter. Never were the times so auspicious. Let us, therefore, not flag in our high mission.

Long may this spirit of progress, so characteristic of our times, continue; and may the meetings of this Society ever be the real post-graduate or polyclinic,—the rendezvous of the old and the young, eager to teach and be taught.

During the year 1882 the Society held thirty-one meetings. Sixty-six papers and reports were presented and discussed.

Thirty-six new members were added to the roll, making the entire membership on January 1, 1883, three hundred and seventy-nine. With these favored data, and this bright outlook, I would fain close my address.

But, sir, a profound interest in the future success and harmony of this Society impels me to sound out a note of alarm.

A serious question is being agitated in the Society, disturbing its harmony and threatening to restrict its usefulness.

I refer to the efforts being made by a few members to introduce women to membership, the consummation of which will mar the administration of any President. The arguments advanced in its favor by the supporters of this new departure are as flimsy and transparent as the professed motives instigating it.

I charge the movers in it with forgetfulness

of the promise made on their introduction to membership.

The renewal of this obnoxious subject is not promotive of, nor can it in any way advance, the interests of the Society. On the contrary, it disturbs the unity of feeling, it divides the members into parties, and has already created a resort to parliamentary intrigue, which is always demoralizing to any association.

Mr. President, there are gentlemen in this Society who conscientiously believe that mixed clinics, mixed classes in teaching, and mixed audiences at lectures on certain subjects in medicine are demoralizing, debasing, and disgraceful.

And, sir, I envy not the men who can stand upon this floor and indiscriminately support either. The presence of women at our meetings will so outrage the sense of delicacy and propriety of some of us, that we will be forced to withdraw therefrom.

I therefore appeal to every friend of the Society to exercise his personal influence in every honorable way, to banish this ferment which has already so soured our feelings.

Dr. W. R. D. Blackwood read a paper on the "Causes and Treatment of Constipation" (see p. 753).

#### DISCUSSION ON CONSTIPATION.

Dr. Benjamin Lee said that it is unfortunately the case that while in infant life the movement of the bowels is so easily accomplished as to be an evident source of pleasure, the adult often finds the same function difficult and painful. Ripeness in years and daily repetition seemed to render the individual less expert. The author of the paper has given one reason for this in the fact that children are allowed to eat unsuitable food. American youth are undoubtedly the most spoiled in this respect. They are allowed to eat exactly what their parents eat, and they suffer more from indigestion and constipation than the youth of any other nation.

To secure regular movements of the bowels, persons have been advised to eat bran bread, fruit with skins on, etc.; but these are, in his experience, the cause of dyspepsia, often taking the form of heartburn. Dr. Blackwood is right in his suggestion that purgatives are given in too large doses. The so-called resinoids are useful in small doses. Aloin, for instance, can be used in doses of one-tenth of a grain, daily, as a laxative, with much benefit; and four-tenths of a grain is an efficient purgative. He has also employed with marked benefit, in hemorrhoidal cases, a pill composed as follows:

Pulv. rhei,  $\frac{3}{4}$ iv;  
Pulv. aloes,  $\frac{3}{4}$ ij;  
Pulv. myrrh.,  $\frac{3}{4}$ ij;  
Sapon. Hisp.,  $\frac{3}{4}$ iss;  
Ol. cajeput.,  $\frac{3}{4}$ l.

The powders were rubbed together and the soap then worked in, afterwards the oil. The well-mixed mass is kept in tight bottles. The fresher it is, the better. Three grains of this mass makes an effective pill, which is non-irritating, and may be used a long while without diminishing the susceptibility of the intestines, and often with positive benefit to the hemorrhoidal affection. Cascara sagrada in two-grain doses is also beneficial.

Cases of constipation may be treated successfully by mechanical means. Massage will undoubtedly cure; but the patient must have daily treatment, not only to the abdomen but also to the lower limbs. Vibration of various viscera is a beneficial method. Dr. Lee makes use of an apparatus for this purpose. The patient lies with the portion of the body that is to be vibrated resting on a firm cushion, which is supported by a bar that can be thrown into vibration. The speaker detailed the case of a clergyman who suffered from meningeal congestion, and in whom the bowels were very irregular, the faeces small in amount and of light-brown color, hard, dry, and scybalous. He used the vibrator over the liver on two successive days. The next day the faeces became abundant, soft, and dark green. The benefit has been permanent, and the patient's general condition is steadily improving.

Dr. Dulles recalled the fact that some years ago Dr. Lee had advanced the view that the usual shape of the water-closet seat is not satisfactory, and that a seat with a slit-like opening would be better. This view has much in its favor; and it would appear, further, that the sitting position is not the best for defecation, but that movement of the bowels can be most easily attained when the individual assumes the physiological or squatting position. He had found this position of assistance in overcoming constipation. He did not agree with Dr. Blackwood that constipation is promoted by vegetable diet. On the contrary, he thought that meat diet is responsible for many digestive troubles. He has relieved constipation by a diet of starchy substances. These seem to be provided by nature with a moderate amount of nutritious material in a considerable bulk, so that when eaten they shall leave a considerable residue, the very bulk of which facilitates its expulsion by the bowel. A common method of attempting to get rid of dyspepsia is to limit the diet; and this is often—especially with men of sedentary habits—a cause of constipation, as the bowels, in such cases, have not sufficient mass to act upon.

Dr. Stubbs said he has found the use of coarse oatmeal, thoroughly cooked, taken in cold milk, with or without sugar, or with salt, to be of benefit in preventing constipation. Dr. Jacobi, of New York, uses fine oatmeal, cooked in water, and given in milk by the nursing-bottle to infants; and, conversely,

when the bowels are loose he uses fine barley as a corrective.

He has found the free use of the enema of warm water and a little castile soap beneficial. In cases of inflammation of the bowel cold water should be used. Enemas secure two benefits: they unload the bowel and are antiphlogistic. They are especially suitable in cases of dyspepsia in which medicines are not well borne by the stomach. They have, however, the objection that they may obtund the sensibility of the bowel if too freely used.

Dr. J. C. Morris said he was not anxious about securing a special regularity or frequency in the movements of the bowel, unless signs of constipation were shown; then treatment was called for. He agrees with Dr. Dulles that constipation is promoted by want of bulkiness in the food taken. This is the case with the milk-diet system. It is not the milk that constipates, but the lack of solid matter in the intestine. Many persons are constipated because they do not take enough liquid food. The action of the kidneys is often delayed from the same cause. As a remedy for constipation, he has found good effects from a small enema of water, about an hour before the expected opening of the bowel. Regular movement can be obtained by the use of about two bulbfuls (two to four fluidounces) of cold water or flaxseed tea. If the bowels are not moved in an hour or so, another enema may be taken, this time about one or two quarts, so that the bowels shall be somewhat distended. By this means a movement will be secured.

Drastics are unadvisable. They may occasionally be necessary, but only rarely. A teaspoonful of flaxseed tea swallowed at bedtime often proves a very useful laxative.

Dr. Hamilton referred to the benefits which have been noticed to follow the use of small quantities of Epsom salt, or even common salt, taken every morning.

Dr. Glasgow thought that enemas would accomplish a great deal. A simple form for giving them was a rubber bag with tube attached. The bag being hung up, the water, by its weight, would flow into the bowels under moderate pressure.

In closing the discussion, Dr. Blackwood said that time did not permit him to notice many important points, some of which he was glad to hear referred to in the discussion. He based his opinion as to a vegetable diet being unwise in many instances not upon theory, but upon observation of the hands employed by one of his brothers: out of some thirteen hundred operatives the large majority who relied upon vegetable and especially farinaceous or starchy diet were generally constipated. A bulky loading of the lower bowel exists in many cases of chronic diarrhoea, the liquid discharge passing around or even through the impacted mass.

#### PATHOLOGICAL SOCIETY OF PHILADELPHIA.

*Tumor of the sciatic nerve.* Presented by Dr. G. DE SCHWEINITZ.

THE following case occurred in the hospital practice of Prof. John Ashhurst, Jr., and it is by his permission that I exhibit the specimen. The patient from whom this tumor was taken is at present an inmate of the University Hospital, and gives the following history:

On June 16, 1864, owing to a gunshot wound of the right thigh, he sustained an amputation of that member at the junction of the middle with the lower third. The flaps sloughed, and a few weeks later a re-amputation became necessary. This stump healed, but was somewhat conical in shape and never from the very beginning comfortable, being subject to frequent attacks of severe neuralgic pain. Within a year from the date of the amputation, a small lump, tender to the touch, was noted, situated posteriorly and a little to the outer side of the stump. The pains now became more severe and more frequent, and were of a "jumping" character. The tumor increased slowly in size until three years ago, when its growth became more rapid, and at the same time the painful nature of the affection more pronounced, until lately the suffering was wellnigh unbearable. Finally the growth assumed the size which you see it now presents, and on the 12th of last month Dr. Ashhurst removed it; since which time the patient has been free from all pain, except such as naturally accompanied the healing of his wound.

The growth is an irregularly-shaped mass, about as large as a small hen's-egg, having an external envelope of adipose tissue, loosely held together by connective tissue. On section the interior is seen to be a somewhat elastic, rather dense-looking growth, of whitish color, over which pass a few yellowish fibres, probably strands of the sciatic nerve. Microscopic examination of the true tumor-mass shows an entire absence of any nervous element, a section exhibiting fat cells, fibrous tissue, some spindle cells, and numerous free nuclei near the enlarged and dilated blood-vessels.

The tumor would, of course, be classed clinically as a neuroma following amputation, while in truth its pathological nature is that of a fibroma. It is interesting that a growth causing so much pain should be without any demonstrable nervous endowment; and surgically it is further worthy of note, because its removal was attended by immediate and probably permanent relief to the patient, a desired result which is by no means always obtained by the excision of these growths.

Dr. LAURISON, by invitation, made some remarks upon the bacillus tuberculosis, and exhibited a number of specimens. He said

that he did not employ nitric acid in preparing his specimens, as it seemed in many cases to bleach out all the bacilli from the tissues, but uses formic acid in the proportion of one pint of formic acid to two pints of alcohol. It was a curious fact that the bacilli occurred in patches, while in other parts apparently equally diseased they were present in small numbers.

THURSDAY EVENING, JUNE 14.

The President, Dr. TYSON, in the chair.

*Kidneys and heart from a case of chronic Bright's disease; extreme uræmic dyspnoea; œdema; relief by acupuncture.* By J. H. MUSSER, M.D.

R. T., æt. 35, admitted to the University Hospital July 17, 1878; single; a packer of goods; frequently exposed to draughts while in profuse perspiration. Used tobacco to excess, and was occasionally intemperate: once or twice a year he would "spree." At twenty-two he had a chancre (?); no secondary symptoms. Three times he had gonorrhœa. Always healthy prior to present illness; never had rheumatism.

The patient inherited a tendency to phthisis from both parents, and to rheumatism from his maternal grandmother.

The onset of the present illness was observed two years ago by a sudden night-attack of dyspnoea. The dyspnoea continued for nine weeks, worse at night, and preventing work in the daytime. œdema of the feet and frequent micturition accompanied the dyspnoea. He improved, to have a relapse in four weeks of a month's duration, followed again by temporary improvement and a third relapse. From the latter he never rallied,—œdema, cough, dyspnoea, frequent micturition, and dyspeptic symptoms being constantly present. The cough was dry and attended by substernal pain. The œdema was general. When admitted to the hospital, under the care of Prof. Pepper, his condition was as above mentioned. During the July, August, and September following, the asthmatic attacks continued. In October they were relieved, but the anasarca became more pronounced.

It may not be out of place to say that the dyspnoea was very severe, and almost defied treatment. It presented the clinical characters of uræmic asthma, and was relieved only by inhalations of nitrite of amyl or by hypodermatic injections of morphia. The anasarca was very great, and not relieved by diuretics, diaphoretics, or cathartics. In October acupuncture was resorted to, with temporary relief to the lower extremities and scrotum,—its good effect lasting five days only, but being so marked as to encourage one in its use. During the following three months the punctures were made about fifteen times, and after each operation about three pints of serum would drain away. The latter part of

December erysipelatous inflammation developed about the punctures on the right leg and extended over it. During the progress of the inflammation large bullæ would form, the bursting and continued free discharge of which caused an entire disappearance of the œdema of both legs. Relief was not only afforded by these operations to the œdema, but the attacks of asthma notably diminished in frequency and severity. January 8, two weeks after the inflammation of the right leg developed, sloughing took place. The sloughing was confined to the calf of the leg, was deep, and was attended with free serous discharge from the ulcers. In a few days a low typhoid state set in; he rapidly lost strength, and on the 7th of February died of exhaustion.

When these notes were taken (January 8), the remaining features of the case were as follows. He was emaciated and anæmic, and his skin was harsh and dry, his countenance anxious; appetite poor; flatulent dyspepsia marked; the bowels constipated; hemorrhoids; tympanitic abdomen; slightly-enlarged liver; normal spleen.

At the apices of the lungs diminished expansion; fluttering, impaired resonance and increased fremitus at the left; moist crackling and subcrepitant râles heard throughout the lungs. Apex-beat of heart in sixth interspace one-fourth inch inside of nipple-line. Veins of right side of neck enlarged. Cardiac impulse moderately strong. At apex a low-pitched systolic murmur; muscular element lessened. At base pulmonary second accentuated.

The width of the cardiac area of dulness was increased one-half inch to the left, and was not changed by full inspiration.

Urine contained albumen; amount varying, at times two-thirds, then one-third bulk. Hyaline and numerous granular casts.

*Ophthalmoscopic Examination.*—Small disks. Myopia. O. D., disk dirty-gray. Veins tortuous. No marked change in the color of the nerve-outlines, misty and slightly swollen. O. S., disk same, but more marked. No hemorrhage in either eye. Diagnosed incipient neuritis.

*Autopsy*, five hours after death.—No rigor mortis; emaciated; commencing ecchymoses. Great fulness of the venous circulation.

*Lungs*.—Apices bound down by adhesions. Slight right hydrothorax. Base of left lung, anterior and posterior, adherent. At left apex three or four areas of catarrhal pneumonia.

*Heart*.—Weight, twenty-one ounces; left ventricle-wall hypertrophied; mitral valve insufficient, admitting almost three fingers, its cusps thickened; one leaflet of the aortic valve slightly diseased; left cavities increased in size. Aorta atheromatous, a large patch especially one-half inch from the valves.

*Liver* enlarged, hard, congested. *Kidneys* small, congested, capsules adherent; relation of cortical to medullary substance normal.

*Microscopical Examination.*—The kidneys showed decided interstitial nephritis, with fatty degeneration of the tubular epithelium. The liver was slightly cirrhotic and fatty. The muscular fibres of the heart had undergone slight fatty degeneration.

*Aortic-valve disease due to the combined action of strain and rheumatism; excessive dilated hypertrophy.* By J. H. MUSSER, M.D.

Neither the habits, the hygienic surroundings, nor the social conditions of Mr. C. K., from whom these specimens were removed, had any relation to the cause of his illness. As a laborer in a rolling-mill his occupation might have had some predisposing influence on the localization of the disease,—he being exposed to extremes of heat and obliged to do heavy lifting. The family history did not disclose hereditary disease. Withal in the past twenty years—at this noting he was aged 47—he had had frequent attacks of inflammatory rheumatism, and in 1875—four years previous to this account—he had an unusually severe attack, after which he recognized his present palpitation and indigestion, characterized by pain and vomiting. These symptoms increased in frequency and severity, and were often attended by oedema of the legs. The last three years he was unable to work. Within the year he lost in flesh and strength, and had several attacks of pulmonary congestion.

On admission to hospital, December, 1879, he was "slightly emaciated; sallow complexion; anaemic appearance; countenance of suffering; dry skin; cold extremities; ankles oedematous; muscular weakness; tremor on exertion; marked prominence of lower part of chest, and bulging of praecordia; sternum pushed forward, lower half especially, giving pouter-pigeon appearance. Impulse marked in normal cardiac area, and extending two inches to the left; epigastric pulsation; pulsation of veins of neck; apex-beat in sixth interspace one inch outside of nipple-line; no hepatic pulsation. A line drawn diagonally from the second right costo-sternal articulation to the fourth rib, one inch from right nipple-line, and then vertically to the hepatic dulness, represented the right border of cardiac dulness. From the top of the third left rib, one inch from the sternum, a uniformly curved line, extending to the apex-beat, showed the left limit. By joining these lines with horizontal ones, the upper and lower borders are defined.

"On auscultation, at the aortic orifice a strong systolic murmur, transmitted to the vessels of the neck, and a rough diastolic murmur, transmitted to the base and along the sternum, are noted. At the xiphoid cartilage and at the apex, systolic murmurs, differing in pitch, are heard, the latter also at the spine of the left scapula. Pulse small, feeble, compressible.

"Cough and muco-purulent expectoration are complained of, and the physical signs of bronchial congestion are observed. The appetite is poor; pyrosis and flatulence distressing; bowels constipated; urine slightly albuminous; no casts."

*Subsequent course.*—With calomel and soda, and a liquid diet at first, followed by digitalis and quinia, the venous stases had disappeared and the cardiac symptoms ameliorated within a month. After exposure to cold, internal venous congestion and oedema had supervened, and in five days—January 20, 1879—he died of pulmonary congestion.

At the autopsy the lungs, liver, spleen, and kidneys were found characteristic of dilatation of the heart,—congested and with increase of connective tissue in the latter three organs. The heart presented very interesting lesions. It was enormously enlarged, weighing thirty-two ounces. The right heart was dilated; the ventricle-wall averaged one-eighth inch in thickness; the tricuspid orifice was insufficient, and admitted four fingers. The left ventricle-wall averaged one-half inch in thickness; the mitral valves were slightly thickened, and a few opaque patches were seen. The aortic valves presented a remarkable appearance: two of them were fused together, and were rigid, projecting in the lumen of the orifice, the other valve also assisting in narrowing the calibre of the opening by rigidly jutting outward. The lumen was scarcely more than a slit. The coronary arteries were not closed, and were found at the bottom of a pouch with calcareous walls. On one side the deposited calcareous matter of which the valves were composed extended under the endocardium to the base of one of the mitral leaflets. Of course the valves were covered by endothelium.

It is of interest to note that the mitral valves comparatively escaped the inflammatory storms, while the aortic valves were so markedly affected,—contrary to the usual rule. It is suggested that a chronic valvulitis, or at least hyperæmia, might have been started by the strain incident to his occupation, and hence the valves readily invite acute inflammatory processes, the present case being a secondary degenerative result thereof.

## REVIEWS AND BOOK NOTICES.

*EXPERIMENTAL PHARMACOLOGY.* By Prof. L. HERMAN. Translated, with Notes and Additions, by ROBERT MEADE SMITH, M.D. Philadelphia, Henry C. Lea's Son & Co., 1883.

This little volume is a well-written translation of a work in itself excellent, the value of which has been greatly enhanced by the additions of the translator. It is just the kind of book that is needed in the physiolog-

ical laboratory, containing an admirable description of apparatus and of methods, and devoting much space to the manner of correctly interpreting the results of experiment. Every section exhibits well-selected matter added by Dr. Smith, still further improving and fitting the work for the American student, whose opportunities for practical study are, unfortunately, not as great as those of his foreign cousin. Besides mere additions, Dr. Smith is the author of several entire sections, making the amount of original material contributed by him almost equal in bulk to that of the original volume; and a critical examination convinces us that these extensive additions are in every way justified by their importance.

The subject-matter is presented in a clear and acceptable form, and the student is assisted by abundant illustrations. It is compact and thorough, and, whilst adapted to the tyro, is a sort of *vade-mecum* for the more experienced investigator. In short, it is in every sense a good book.

F. D.

BACTERIA AND THE GERM THEORY OF DISEASE. By Dr. H. GRADLE. Chicago, W. T. Keener, 1883.

The most interesting of all problems whose solution is now pressing upon the medical profession is that of the relation of the lower organisms to the diseases of higher animals and man. Although in the practical work of discovery much knowledge of technique, much personal skill, and much patience of brain and body are required, the elements of the problem are of such character that the facts and their relations can be apprehended by any intelligent physician. Indeed, in the present case the general profession may be looked upon as the jury; the investigators as the witnesses; the counsel on either side, and such men as Prof. Gradle, as the judges who sift and sum up the evidence. Keeping this metaphor in view, we should say emphatically that Judge Gradle's charge is a singularly fair and able one. Clear, well written, and thorough, it ought to be widely read and thought over. Of all the general overlookings of the field it seems to us the most thorough and impartial of any which we have seen.

#### GLEANINGS FROM EXCHANGES.

CARBOLIC ACID IN CLINICAL MEDICINE.—Prof. J. G. Westmoreland, of Atlanta, gives the following practical observations as the result of his experiments with carbolic acid:

"Shortly after the remedy had been brought to notice, I, from some report of its action probably, used it as a general styptic for menorrhagia, in the dose of two drops re-

peated every two hours. Proving successful for the relief of this hemorrhagic condition, I decided to test it in *purpura haemorrhagica*. Accordingly, in a case presented in the Medical College clinic, which had been treated without benefit by the usual means, muriated tincture of iron, etc., I prescribed carbolic acid in the dose of two or three drops every three or four hours, well diluted with water, with complete success in a day or two.

"While the styptic effect may not be universally recognized, no one, as far as I know, objects to its use in this way. It is the local action, as described, which calls forth the opposition. When it is asserted that the undiluted acid may be applied to *chancre*, *chancroid*, *diphtheria*, *chronic intra-uterine inflammation*, etc., with very little pain, the war begins. Physicians assert, of course without ever having tested it, that destructive action will be had upon the mucous membrane, and therefore cicatricial tissue necessarily follows. Learned gynaecologists, to whose use the remedy seems to me peculiarly adapted, forbid its introduction into the uterus, alleging that stenosis will be the result. Whether this conclusion is reached by experience or reasoning, it is certainly not more reliable than the opinion formed by hundreds of applications of the pure acid made in *endometritis*, *diphtheria*, *cancerous ulcers*, etc., without stenosis or other unfavorable result. When properly applied, so as to come in contact with the diseased part alone or the internal mucous membrane, very slight pain is produced, not more than that from astringent solutions of moderate strength. I have applied it with a camel's-hair pencil to the pseudo-membrane of *diphtheria* in the mouth of an infant, and by injection to the urethra in *gonorrhoea*, taking care that the acid does not come in contact with the lips, glans penis, or prepuce. When applied to the uterus or vagina, its contact with the pudendum must be avoided.

"In the treatment of cancer I have used the acid only as an application to the ulcerated surface; but, from the promptness with which progress is arrested and superficial healthy tissue formed, I have hope of success, to some extent at least, in the bold attempt at cure by injection into the indurated tumor.

"In the commencement of what seemed to be malignant (cauliflower) disease of the os uteri, complete and permanent relief has followed the twice-a-week application of pure acid.

"Piles may be permanently cured, in half a week or two weeks, by injecting the tumor with undiluted carbolic acid. The needle of a hypodermic syringe charged with the acid must be plunged into the centre of the tumor and the piston slightly moved forward so as to discharge one to three drops. Let the needle remain for a minute, and then with-

draw. Each tumor must be thus injected, and, if large, two punctures should be made. The tumor becomes pale, shrivels, and generally becomes dark and putrid in a day or two. No great pain attends the operation. Only a stinging sensation is experienced, which lasts a few moments.

"When several tumors exist, a second operation sometimes becomes necessary, owing to the failure to inject all the prominent points. On the second day the injection may be repeated if all the tumors do not become pale, lessened in size, or dark.

"The benefit derived from carbolic acid is, doubtless, derived from the peculiar action upon the capillaries and the blood itself. When applied to a surface it becomes white and bloodless, and when thrown into a mass of blood it is made more or less coagulable, according to the proportion of the mixture. This driving of the blood, as it were, from the surface accounts for the control of inflammation by its local application, and the coagulating quality renders it useful as a general styptic. Indeed, inflammation, I believe, may be prevented to a large extent, in a part injured, by a proper application in diluted form. And while its good effects in this way are attributed to the destructive action upon bacteria, we think its good effects can be explained without recognizing the existence of these animalcula as factors in the production of inflammation and putrescence."—*Southern Medical Record.*

**DEATH FROM CHLOROFORM-ADMINISTRATION.**—Dr. Hunter McGuire reports a case of sudden death during chloroform-administration (*Virginia Med. Monthly*). A woman, 35 years old, without signs of organic disease of heart or lungs, applied for treatment for ruptured perineum. About (*sic*) a drachm of chloroform was poured on a napkin, and she breathed it in gradually and quietly. Dr. McGuire describes the result very graphically as follows:

"After she had breathed the anaesthetic for about two minutes and was still conscious, the pupils of both eyes slowly dilated to two or three times their natural size. When I saw this I spoke to her, and she answered me intelligently. While she was speaking, the pulse in the arm upon which I had my finger stopped suddenly. It did not flutter and gradually fail, but abruptly ceased. The last stroke was as full and distinct as those which preceded it. A blow upon the heart would not have stopped it more abruptly, so sudden and complete was the *cardiac paralysis*, and this took place before she was under the influence of the chloroform, and while she was yet conscious. When the heart stopped, the face became pallid, some convulsive movements of the muscles of the face and neck occurred, spasmodic, not tetanic in character; dilatation of the pupils slightly

increased, and respiration continued for some seconds after the pulse ceased beating at the wrist. At least twenty-five or thirty respirations occurred after the cardiac paralysis, but the breathing was irregular, convulsive, and imperfect. Fifteen or twenty seconds intervened between the first appearance of dilatation of the pupils and arrest of the heart's action.

"Nitrite of amyl, galvanism (both agents were close at hand), inversion of the body, and artificial respiration, kept up for an hour, were employed, but were of no avail."

**CEREBRAL VACUOLATION.**—Drs. White and Savage read a paper upon this peculiar and interesting pathological condition, which especially exists among the chronic insane, and especially in general paralysis. They recognized especially nine causes for holes in the brain.—1. Small processes of sclerosed meninges, in cases of general paralysis, dipped into and excavated minute portions of cerebral tissue. 2. In the same disease the sclerosed neuroglia, by its contraction, might give rise to small cavities. 3. There might be multiple hydatids in the brain. These three conditions were very rare, the authors having no knowledge of the second, whilst the third was almost confined to animals suffering from staggers. Several references to continental authors were given, whilst the relation of the muslin-appearance to the second of the above was pointed out. 4. The fourth cause was the dilatation of cerebral vessels giving rise to the *état criblé*. It was particularly emphasized that this was, in the majority of cases, of no pathological significance. 5. Shrinking of the cerebral convolutions in some cases gave rise to holes in the subjacent cerebral substance; a very good example of this condition was exhibited. 6. Miliary aneurisms, as Charcot had pointed out, might give rise to holes in the brain-substance; some very marked specimens showing this were exhibited. 7. In the condition known in Germany as *die Porencephalie*, a large gap existed in the brain-substance; this might communicate either with the exterior or the interior of the brain, or both. 8. The Gruyère cheese condition. This, it was pointed out, was quite different from the *état criblé*, for it was due to a dilatation of the perivascular lymphatic space of His. Of the causes of this dilatation nothing was known; probably they were local, so the dilatation was saccular. The authors showed an example of this condition, in which the whole of the brain, except the lower part of the medulla, was riddled with cavities exactly like those found in cheese, and microscopic specimens exhibited showed that these holes were produced by this perivascular dilatation. The shape and direction of the cavities also corresponded with that of the vessels. Very few examples of this condition had been carefully described; in England

only one, by Lockhart Clarke, who referred it to the same cause. 9. The authors showed specimens from two remarkable cases in which the kidneys, lungs, liver, heart, and brain all contained holes: in the kidney these cysts were due to the dilatation of either the tubules or Malpighian capsules; in the liver they were due to the vacuolation of the hepatic cells; in the lungs and brain it was impossible to come to any definite conclusion as to their origin, but in both these viscera the cavities contained a peculiar material, staining deeply with logwood; both the subjects were lunatics. Cases in which there were only a few holes, such as patches of softening hemorrhage, were not considered to come within the scope of the paper.—Dr. Savage said that, in the cases of the two lunatics last referred to, the changes were certainly not due to changes produced by preservative fluids after death, as the vacuolation was noticed at the necropsy. Both the patients were general paralytics, but in one the disease was chronic (three or four years), in the other acute (three or four months). He was convinced that the vacuolation occurred under various conditions. This question of multiple cystic disease deserved consideration and discussion.—*British Medical Journal*.

**CURE OF HYDATID CYSTS BY CAPILLARY PUNCTURE.**—Dr. Alessandro Borgherini reports *in extenso* the histories of four cases of echinococcus cysts treated by capillary puncture and withdrawal of a small quantity of fluid. Of the four cases three were cured, but in the other a second puncture with complete evacuation of the cyst was necessary. The punctures were made with the needle of a hypodermic syringe, and the amount of fluid withdrawn was from one-half to two drachms. A slight elevation of temperature followed the operation in every instance, but in one case only did the fever continue for any length of time or rise to any considerable height. Improvement did not follow until from eight to fifteen days after the punctures were made. The author thinks that possibly the cure is brought about by the altered tension caused by the abstraction of a small amount of fluid and the consequent disturbance of osmosis, a process by which the parasite obtains nourishment. Or possibly the slight puncture acts as a traumatic injury impairing the vitality of the parasite.—*Gazzetta Medica Italiana; The Practitioner*.

**ART VERSUS NATURE.**—Discussing the use and advantages of antiseptic injections after delivery, and defending himself against the opprobrium of meddlesome midwifery, Dr. Douglas Martin (*Louisville Medical News*) says, "This doctrine of non-interference with physiological processes is so often urged as a plea for complacent inaction where a patient's health, perhaps life, is at stake, that I think a fuller answer ought to be given.

We do not leave nature alone in a case of club-foot, or of squint, or of teeth out of line. The horticulturist does not leave her alone when from a crab-apple a pippin is developed. She is not left alone when from the coarse, rough, wild dog a setter or St. Bernard is produced. Indeed, throughout the whole realm of nature with which man has immediately to do, the highest forms of beauty and of usefulness are attainable only by means of the appliances of art. Is the fact, then, that childbirth is a physiological process a reason why art should not be laid under contribution to the fullest extent possible for the alleviation of its pangs and the lessening of its perils?"

## MISCELLANY.

**ASYLUM-SUPERINTENDENTS IN SESSION.**—The thirty-seventh annual meeting of the Association of Medical Superintendents of American Institutions for the Insane was opened at Newport, Rhode Island, June 26. Dr. J. H. Collender, of Nashville, Tennessee, presided, and thirteen States, the District of Columbia, and the Provinces of Quebec and New Brunswick were represented. Dr. H. R. Storer, President of the Newport Medical Society, Dr. Foster Pratt, of Kalamazoo, Michigan, and Dr. Darius, of the Willard Insane Institution at Ovid, New York, were presented to the Association. The members of the medical profession of Newport and the vicinity, and the surgeons of the navy in that port, were, on motion, invited to be present at the sessions of the Association. The following officers were elected: *President*, Dr. John P. Gray, of Utica, New York; *Vice-President*, Dr. Pliny Earle, of Northampton, Massachusetts.

**TRANSPLANTATION OF MUSCLE IN MAN.**—Helferich (*Archiv f. Klin. Chirurgie*, B. xxviii, p. 562) reports a case in which, as a result of the removal of fibro-sarcoma from the arm of a woman aged 36, the whole upper half of the biceps, with the exception of a thin strand at its outer part, was extirpated. Into the cavity which was left he promptly introduced a large fragment of the biceps from the leg of a dog. The cut surfaces were carefully brought together with sutures, as little injury as possible being done to the parts. The transplanted muscle was much more voluminous than the original portion, and was long after the operation distinctly perceptible to the touch. Electric experiments instituted about three months after the operation showed that the biceps reacted perfectly naturally to both kinds of current. The high point of stimulation situated at the place of section of the musculo-cutaneous nerve was, however, absent. The movements at the elbow-joint were almost normal.—*Lancet*.

**JUNIATA VALLEY MEDICAL SOCIETY.**—At the meeting of the Juniata Valley Medical Society, held this year at Cresson Springs, a large number of Philadelphia physicians were present as the guests of the Society, a special excursion having been tendered by the Pennsylvania Railroad Company. The trip was greatly enjoyed, as arrangements had been carefully made by the company for the comfort and entertainment of the guests. A very satisfactory session of the Society was held, at which the usual business was transacted. Dr. W. R. Findlay, of Altoona, was elected *President*; Drs. John Lowman, of Johnstown, and I. Thompson, of Blair county, *Vice-Presidents*; Dr. H. Jacob, of Altoona, *Secretary*; and Dr. S. M. Ross, of Altoona, *Treasurer*.

**EFFECTS OF PLANT-LIFE ON MAN.**—At Joinville-le-Pont, a suburb of Paris, recently, a young married couple, horticulturists by profession, were found dead in their greenhouse, where they had spent the night. The medical report stated that they were asphyxiated by the emanations from the flowers and plants.—*Lancet*.

**PROFESSORS FOR JOHNS HOPKINS.**—In view of the needs of the medical school and hospital shortly to be opened, the trustees have commenced the organization of a faculty, and have selected Prof. Remsen for the chair of Chemistry, Prof. Martin, of Biology, and Dr. Billings, of Hygiene. It is not known yet whether these gentlemen have positively accepted.

**DR. PARISH'S PORRO-CÆSAREAN OPERATION.**—The operation at the Philadelphia Hospital, of removal of the uterus and appendages at the termination of pregnancy, by Dr. Parish, terminated fatally to the mother on the third day.

**DR. ROBERT DRUITT,** author of "Druitt's Surgery," so well known to American students, died in Kensington, England, on the 15th of May, at the age of sixty-nine.

## NOTES AND QUERIES.

### A FRAUDULENT PUBLICATION.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—I have recently received several letters from physicians inquiring what is my relation to a volume entitled *An Epitome of Medicine, Surgery, and Obstetrics, Including Nervous Diseases and the Diseases of Women and Children*, by Alfred Stillé, M.D., etc., D. Hayes Agnew, M.D., etc., R. A. F. Penrose, M.D., etc. Philadelphia: Samuel M. Miller, M.D., Publisher, 1883.

Will you permit me to state that my relation to the volume is that of a professor whose legal rights have been infringed, and whose professional rights have been treated with dis-courtesy? that the work both misrepresents and perverts my teaching, and has been issued without my knowledge, consent, or approval, and continues to be circulated, notwithstanding my exposure of its real character before my medical

class at the close of the last session? I beg to warn all medical men that the "Epitome" is not in any sense "by" me, as its title-page declares it to be, and that I denounce it as being a false and fraudulent publication.

ALFRED STILLÉ, M.D.

July 20, 1883.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—I am receiving letters from various sections of the country, asking for information in regard to my connection with a little volume published by a Dr. Samuel Miller, and entitled *An Epitome of Medicine, Surgery, and Obstetrics*, by Drs. Stillé, Agnew, and Penrose.

I have no desire to increase my correspondence, already too onerous, and therefore deem it best to avail myself of the columns of your widely-circulated journal to inform my professional brethren that I disown any relation whatever with this miserable piece of literary larceny, published entirely without my knowledge, and only remarkable for inaccuracy, stupidity, and audacity on the part of its author.

Yours, truly,  
D. HAYES AGNEW, M.D.

## OFFICIAL LIST

### OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JULY 14 TO JULY 21, 1883.

**BAILY, E. I., COLONEL AND SURGEON.**—In addition to his present duties, to take charge of the office of Medical Director Military Division of the Pacific during the absence of the Medical Director. Paragraph 2, S. O. 64, Military Division of the Pacific, June 30, 1883.

**SUTHERLAND, C., COLONEL AND SURGEON, MEDICAL DIRECTOR MILITARY DIVISION OF THE PACIFIC.**—Granted leave of absence for one month, with permission to apply to the Adjutant-General of the Army for extension of two months. Paragraph 1, S. O. 64, Military Division of the Pacific, June 30, 1883.

**CAMPBELL, JOHN, LIEUTENANT-COLONEL AND SURGEON, MEDICAL DIRECTOR DEPARTMENT OF THE SOUTH.**—Leave of absence on surgeon's certificate of disability granted by S. O. 50, Department of the South, May 21, 1883, extended one month on surgeon's certificate of disability, with permission to leave the Department of the South. Paragraph 7, S. O. 156, A. G. O., July 9, 1883.

**MAGRUDER, D. L., LIEUTENANT-COLONEL AND SURGEON, MEDICAL DIRECTOR HEADQUARTERS DEPARTMENT OF THE MISSOURI.**—Granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 145, Department of the Missouri, July 12, 1883.

**ELBREY, FREDERICK W., CAPTAIN AND ASSISTANT-SURGEON.**—The leave of absence granted on surgeon's certificate of disability by S. O. 26, A. G. O., January 31, 1883, further extended six months on surgeon's certificate of disability. S. O. 162, A. G. O., July 16, 1883.

**POWELL, JUNIUS L., CAPTAIN AND ASSISTANT-SURGEON.**—Assigned to duty at Fort Columbus, N. Y. H. S. O. 130, Department of the East, July 18, 1883.

**RICHARD, CHARLES, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.**—Assigned to duty at Fort Adams, Newport, Rhode Island: S. O. 130, Department of the East, July 18, 1883.

### LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM JULY 7 TO JULY 21, 1883.

**Medical Inspector A. HUDSON,** Assistant to Bureau of Medicine and Surgery, and P. A. Surgeons S. H. GRIFFITH and E. H. GREEN, granted leave of absence for one month.

**Dr. HORACE BROWN SCOTT** appointed an assistant-surgeon. Assistant-Surgeons CHARLES W. RUSH, OLIVER DIBBLE, J. H. BRYAN, and J. D. GATEWOOD promoted to P. A. Surgeons.

**Surgeon C. H. WHITE** and P. A. Surgeon A. C. HEFFINGER detached from the "Lackawanna;" the former placed on waiting-orders, and the latter granted three months' leave.

**Surgeon T. WOOLVERTON** detached from the Naval Hospital, Philadelphia, on the 31st of July, and granted leave of absence for one year, with permission to leave the United States.